

GREEN'S Fruit Grower

"A MAGAZINE WITH A MISSION"

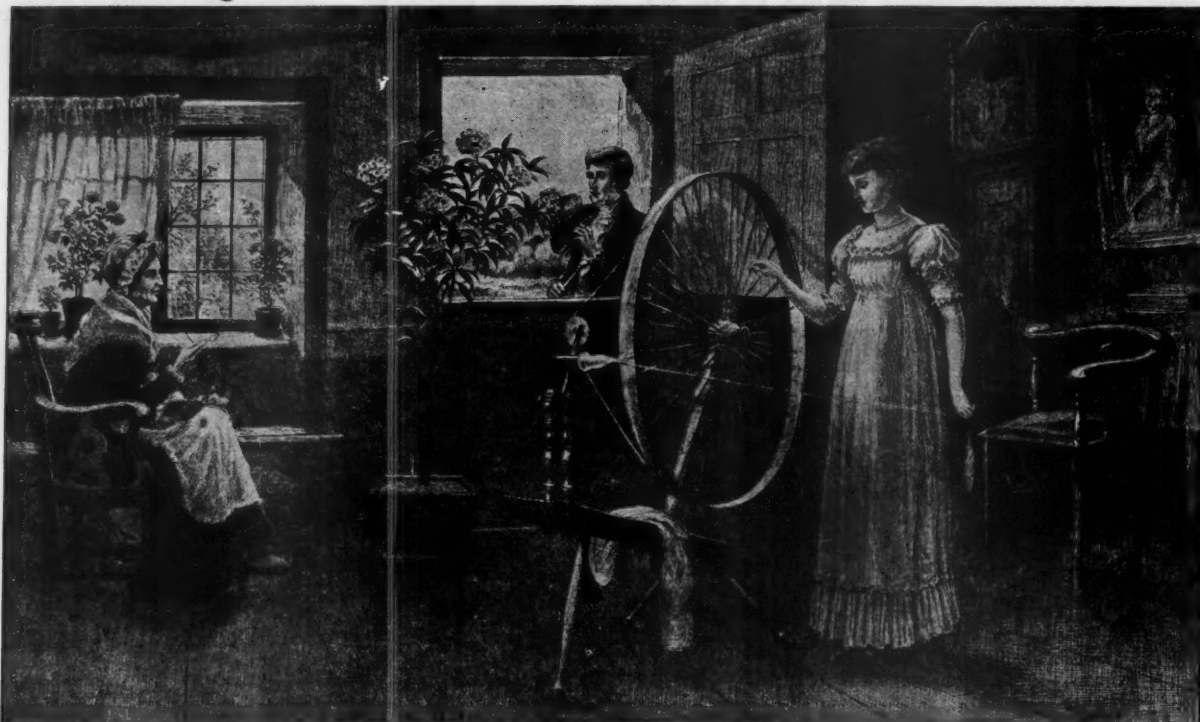
JULY, 1910



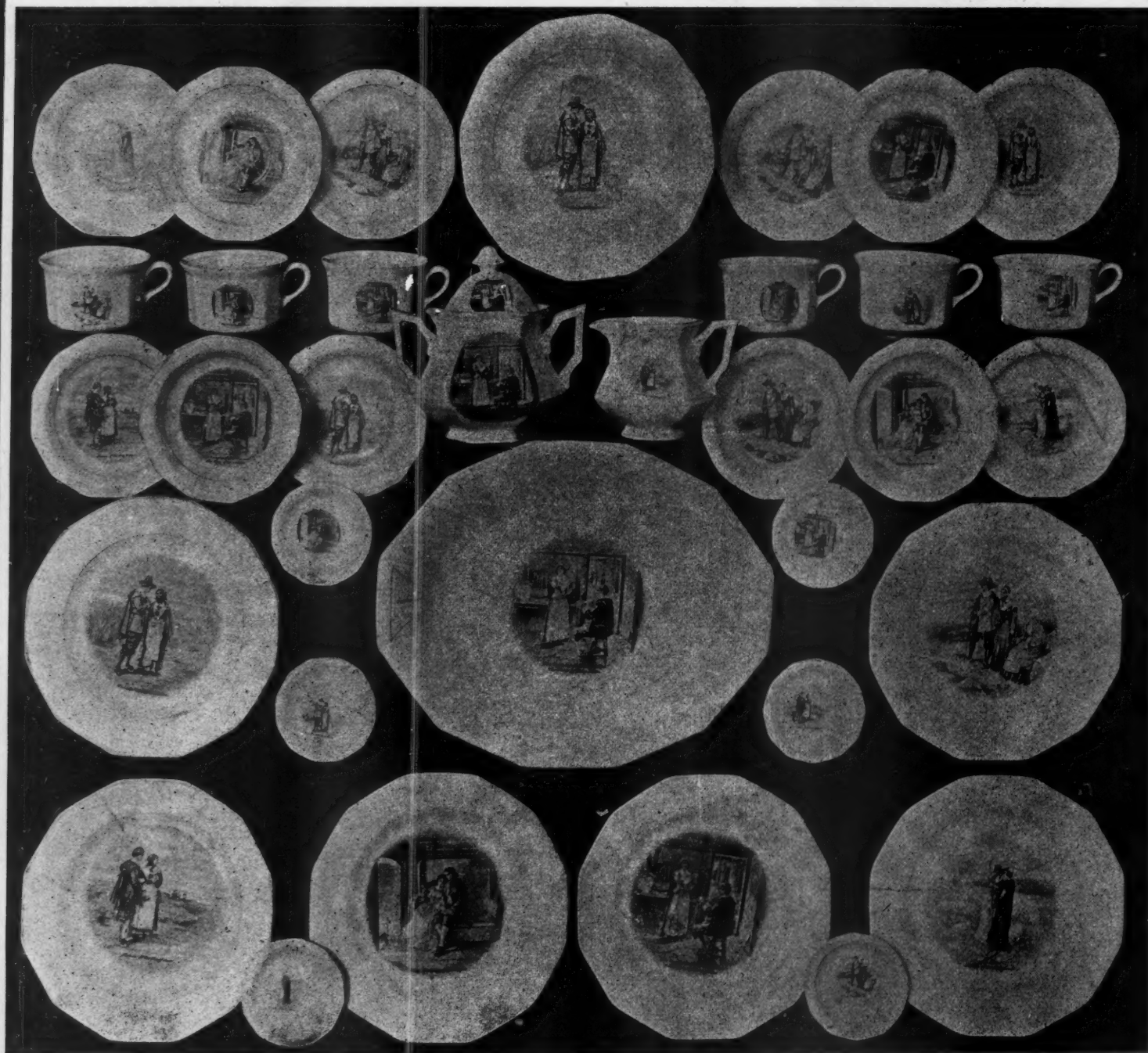
"TEMPTATION"

A REMARQUE PROOF ETCHING

"Awaiting an Opportunity" is the title of this handsome etching printed from pure copper plates, size 20 x 27 inches.



Our Offer—The above handsome etching will be sent postpaid, mailed in a strong tube, to anyone sending in one yearly subscription to Green's Fruit Grower at 50 cents. Address Green's Fruit Grower, Rochester, N. Y.



THE MAYFLOWER DINNER SET. "Ye Colonial Shape."

PATTERN USED A HUNDRED YEARS AGO (REPRODUCED).
Decoration—The decorations are those characters from Longfellow's Immortal Poem, "The Courtship of Miles Standish," the most beautiful love story in American history. The trimmings are in imperial blue. "Speak for yourself, John," remarked the beautiful Priscilla as she deftly wound the yarn from the hands of John Alden, who, deeply in love with her himself, was pressing the suit of his friend. What an inspiring lesson to every American is the story of these rugged pioneers.

Description of the Mayflower Ware—The illustrations used in manufacturing the first or original set of these dishes cost several thousand dollars. This ware is the celebrated "Sterling China" Ware. It is snowy white and very durable. The decorations are burned into the ware and will not wear off. This elegant thirty-five piece Mayflower dinner set will be sent to your address when complying with the conditions named below as follows:

Our Offer—A paid-in-advance subscription to January, 1914, and this 35-piece set of dishes for \$3.75. N. Y.—Do not let the fact that you live some distance from us hinder you from ordering this set as we are shipping these dishes by freight all over the United States. If your order is received before July 15, we will mail you the handsome etching, "Awaiting an Opportunity," as shown above on this page, securely packed in a strong tube. Size of picture 20 x 27 inches. Address Green's Fruit Grower, Rochester, N. Y.

GREEN'S FRUIT GROWER

A Monthly Magazine for the Fruit Growing Farmer and His Family.

CHARLES A. GREEN, Editor

Volume 30.

ROCHESTER, N. Y., JULY, 1910.

Number 7.

FIRE BLIGHT OR PEAR BLIGHT

H. H. WHETZEL, N. Y. State College of Agriculture.

This disease which is known by a number of names such as "Fire Blight," "Pear Blight," "Twig Blight," "Blossom Blight," "Blight Canker," etc., is one of the most common and destructive diseases of pear trees. It also attacks apples, quinces and a few of the ornamental plants of the apple family. In some sections it also attacks plums and apricots. It is an American disease hav-

ing been first reported from the highlands of the Hudson river about 1780. So far as is known it does not occur outside of North America. However, in this country it is distributed from the Atlantic to the Pacific and north into the fruit regions of Canada. It is the most dreaded of fruit tree diseases, particularly of the pear. It is distinctly epidemic in its nature appearing suddenly in a locality where it may not again be destructive for ten or fifteen years. Nevertheless it is always to be found every season to a limited extent in any locality, ready when the proper combination of conditions arise to spread rapidly and again work havoc.

the spring the bacteria spread from these cankers into the adjoining healthy bark where they are produced in such abundance that they ooze out in sticky, milky drops (Fig. 2). Flies and wasps come to these oozing cankers and become smeared from head to toe with the sticky, milky ooze. This ooze is made up almost entirely of the blight bacteria (Fig. 3). These insects then fly away to the opening blossoms which they visit for the nectar or honey leaving some of the bacteria from their feet or mouth parts in the nectar of the blossom. Here the bacteria multiply rapidly, penetrating the tender tissue and kill it causing "Blossom Blight" (Fig. 4). Bees visit these infected blossoms and spread the bacteria throughout the orchard which may sometimes show blossom blight on practically every spur. This blossom blight is common on both pears and apples and is usually the first evidence of the disease that the grower observes in the spring. The bacteria also ooze from these blighting blossoms from which they are carried by sucking insects such as plant lice to the tips of growing shoots, and "Twig Blight" results. Every grower has seen the growing tips of the pears and apples turn black and wither on the trees. Sometimes sucking insects or the curculio carry the bacteria to young fruits introducing them into the wound which the insect makes, thus giving rise to "Fruit Blight" (Fig. 5), which is not at all uncommon both in apples and pears. The bacteria work their way down the blighted blossom spur (Fig. 4) or blighted shoot (Fig. 1) and spread out into the bark, forming the cankers which are so evident in Figs. 1 and 4. These cankers are always marked by a well defined line or crack between the



Fig. 1. Blighted shoot with canker about the base.

discovered and healthy bark. With the formation of these cankers the seasonal cycle of the disease is complete. The bacteria thus go into winter quarters in these hold-over cankers, becoming active again the next season, providing a source of infection for the spreading of the disease.

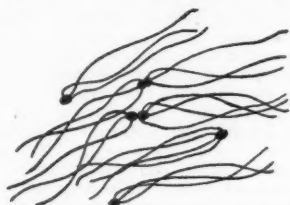


Fig. 3. The Blight Bacteria. When stained and much magnified the flagella by which they swim may be seen.

This disease is sometimes very abundant and destructive in nursery stock. The source of infection in these cases has been repeatedly located in hold-over cankers on old neglected pear and apple trees or wild thorn trees near the nursery. The removal of these trees or of the cankers in them has almost always given immediate relief from the severity of the blight in the nursery stock. The disease is frequently introduced into the nursery stock by bees which visit the stray blossoms on quince or apple trees in the nursery row. From these centers of infection it is spread by plant lice and leaf hoppers to adjoining trees and from these to others thus spreading the epidemic. Mr. V. B. Stewart, holder of the C. W. Stuart & Co. fellowship, demonstrated during the summer of 1909 that this disease can be profitably controlled in nursery stock. By a systematic cutting out and disinfecting he was able to save a total of 2317 apple, pear and quince trees which became infected during the season but which were saved by prompt removal of the blighted tips of the shoots. From 130 acres devoted to apple, pear and quince stock he lost only 346 trees during the season, 256 of which were lost from a quince block which was badly infested and many of the trees were beyond saving when he began his work in the spring. Fig. 6 shows Mr. Stewart's outfit for removing the blight. By means of an automatic counter he kept a careful record of the number of trees



Fig. 2. An active hold-over canker in the spring. Note the milky drops full of bacteria oozing from bark.

The disease is caused by bacteria as has been repeatedly shown by careful investigations and experiments. There is absolutely no question any more as to the cause of pear blight. That these bacteria alone cause the disease is a fact, not a theory and as such is no longer debatable. These bacteria pass the winter in cankers on the body or main limbs of the trees (Fig. 1). In



Fig. 4. Blossom Blight. Note the canker about the base of the blighted spur.

pruned and the number of trees removed.

The secret of success in controlling fire blight is the frequent and systematic removal of all blighted blossom spurs and shoots before the disease can get into the trunk or large limbs of the trees. This means the inspection of the orchard or nursery from one to three times a week, carefully removing the blighted parts and disinfecting the wound wherever a cut is made, with corrosive sublimate, one part in a thousand parts of water. Disinfect the wound, not the tools. Failure to inspect and remove the blight regularly and frequently means a certain loss of large limbs and often of trees, for the blight may extend into a tree quite rapidly killing long limbs in a few days if not removed. In ordinary seasons one man should be able to handle ten acres of Bartlett pears ten years old by going over the trees once or twice a week. In controlling the disease in nursery stock it will be found exceedingly helpful in preventing the spread of the disease to eradicate the apples as far as possible. This was very successfully done in the Stuart nursery this season by dipping the lice infested shoots into whale oil soap dip, seven pounds to fifty gallons of water. Mr. J. V. Curtis, of Hilton, N. Y., has successfully used the above method in controlling the fire blight in his pear orchard of a thousand trees, during the seasons of 1908 and 1909. The writer will be very glad to answer further questions in regard to this disease.—H. H. Whetzel, Plant Pathologist, N. Y. State College of Agr., Ithaca, N. Y.

Family Life of Birds.

The majority of our birds are monogamous, and so far as many of them are concerned the marriage seems to be for life. With touching fidelity the mates stay together in life or death. The nutcrackers and finches, for example, can scarcely be separated for minutes. If one dies there is great grief. If the female dies the male nearly always remains single during the remainder of the season. It sometimes occurs that he will not forsake his dead mate, but sits beside the little corpse until driven away. The females, on the other hand, overcome their grief more easily, and their widowhood rarely lasts long. A case in point where one of a nest of magpies was found dead, evidently from eating from a poisoned fox, but no later than in the afternoon of the same day the widow led a new groom to her home.



Fig. 5. Fruit Blight. Introduced through wounds made by the curculio. Note the oozing drops.

The Politician.

A farmer out west did not know in what business to start his son, so he placed him in a room in which there was a Bible, an apple, and a dollar. He decided that if after a short time he found the boy eating the apple he would make him a farmer, if reading the Bible he would have him trained for the church, and if he had pocketed the money he would make him a stock broker. When he entered, he found the boy sitting on the Bible and eating the apple, with the dollar in his pocket. He became a politician!



Fig. 6. Mr. Stewart with his outfit for removing blight from the orchard.

Irrigation in New York and Other Eastern States.

We of the eastern states have looked with wonder upon the vast fortunes, the hundreds of millions of dollars expended in the west for irrigating land not only in the production of farm crops but in orcharding. We of the east have no definite knowledge of irrigation, have not seen how it is possible to artificially irrigate a large tract of land.

It requires skill and experience to irrigate land for farm purposes or for orchards. Too much water is more disastrous than too little.

Having watched the irrigation problem of the west for many years and beginning to suffer from serious drouths, enterprising men of the eastern states have been turning their attention to the irrigation of orchards and berryfields.

Mr. F. L. Lamson, registrar of the University of Rochester, has begun a series of experiments which will be continued for a series of years. So far as he has found that the irrigation of his orchards has given profitable results both in fruitage and in the growth of his trees. He finds that his peaches under irrigation yield a much larger crop and the fruit sells at nearly double the price of that ordinarily grown. But it must be remembered that this year and the previous year have been very dry in western New York, and that had his experiments been made in a wet season they might not have shown any results, for we have seasons here when the rainfall is ample for our orchards.

I do not doubt that the time is near at hand when market gardeners and orchardists owning land near lakes and rivers will make use of those waters in irrigating their lands. It will not be long before a dam will be built at Portage, New York, on the Genesee river, which will supply an abundance of water for irrigation and other purposes all the way down the Genesee valley, a distance of over fifty miles. But it is not necessary to wait for the building of this dam, for gasoline engines can be set at work pumping water from the creeks, rivers and lakes applying it directly upon the orchards and fields.

My personal experience with irrigation can be briefly told. Some years ago I had a plantation of strawberries on a low mucky field bordered by a spring brook. I built a temporary dam in this creek and allowed the water from this stream to run through the rows of strawberries. Undoubtedly the ends of the field nearest the brook received too much water and the end most remote not enough. It was several days before we could move around in that part of the field thoroughly moistened, as the surplus water did not disappear readily. After this delay the strawberries were over ripe and very soft. It is my opinion that one result of irrigation was in causing the berries to be more soft than usual. The berries under irrigation were not so deep red in color as those growing under ordinary culture. The experiment did not give me courage to repeat it.

On another occasion having a large field of strawberries on upland I sprayed the field with water from a huge tank set on wheels, much like a street sprinkling cart, of the city. This artificial wetting of the soil did not seem to help the crop. It caused the soil to harden and crack, it being a mixture of clay and sand. My opinion is that clayey soil cannot be so successfully irrigated as sandy or mucky soil.

Here is a report in the Rochester "Herald," telling of a peach crop increased \$1700 by irrigation, at Rochester: "That irrigation is of value, even in the rain belt of the east, is demonstrated by two baskets of peaches on display at the office of the Rochester Railway & Light Company, in Clinton Ave. north. The peaches are samples from a seven-acre orchard owned by Fred L. Lamson, registrar of the University of Rochester, located at Williamson, and irrigated by Lake Ontario water, pumped by a four-inch centrifugal pump, having a capacity of 300 gallons a minute, which is sufficient to irrigate a forty-acre tract.

Water was first applied to the peach orchard about August 20th, and the result is a surprise, even to those who firmly believed in the success of the undertaking. One sample shows ordinary peaches from part of the orchard not irrigated. They are hard and small and below the average quality. The other sample, from the irrigated part, shows a basket of great, luscious yellow peaches, more than twice the size of the fruit picked from the unirrigated trees. The irrigated fruit is sweet, juicy and of better flavor than the other.

Irrigation on this seven-acre orchard increased the returns \$1700 this year alone. The cost of the pumping apparatus was about \$700, a clear profit of \$1000.

SEEING LUTHER BURBANK.



LUTHER BURBANK.

Accompanied his visitors to the garden from which visitors were ordinarily excluded and he acted as their guide, philosopher and friend. Of this garden Mr. Gleason writes:

"Just inside the gate there was a clump of majestic cannas, larger and more brilliant than any we had ever seen—a variety which Mr. Burbank told us had received a gold medal at the St. Louis exposition.

"Then came a bed of giant amaryllis, with flowers nine inches in diameter—as compared with two inches in the ordinary amaryllis—and one of the most striking and varied coloration.

"Across the path was a bed of Mexican evening primroses which, under Mr. Burbank's magic hand, were producing splendid white flowers four and five inches in diameter.

"Nearby was a large mass of crimson eschscholtzia—the familiar California poppy, which had been persuaded to change its common yellow hue into a lovely crimson.

"Not far away was another bed of pure white California poppies, and still another in which all the flowers were of the most exquisite 'old gold' color.

"Of Shirley poppies there was an indescribable wealth of beauty and bloom. One bed was devoted exclusively to blue poppies—when was a blue poppy ever known before?—and it was intensely interesting to see here the experiment actually in progress of making a new flower by carefully weeding out all imperfect specimens and saving the seed of only those which show a tendency toward a desired standard, this seed to be planted again next year, when further selection will be made, and so on, year after year, until the perfect blue flower is secured.

Then there came a bed of fragrant verbenas, also some elegant double 'bachelor-buttons,' which likewise had a unique fragrance. This quality of fragrance, our host informed us, is the most difficult to impart to a flower, but he has succeeded in a number of instances, one of the most noteworthy being that of the fragrant calla lily."

The next day Mr. Burbank accompanied his visitors on a tour of inspection over five extensive farms where his experiments in plant culture are carried on. At Sebastopol they spent the whole morning.

"Here are located the 'proving grounds,' where the most careful and exhaustive tests are made to determine the final quality of the countless new varieties of fruits, flowers, vegetables and trees.

"One of the most important of these was in progress at the time of our visit, which was in the height of the cherry season. Mr. Burbank told us that he had at least 30,000 varieties of cherries under observation, and there were many single trees, none of them of large size, which bore over 300 varieties each. Out of this vast number a very few are selected as worthy of being perpetuated. The cherry-testing season is a very strenuous time, as the work of sampling all these thousands of varieties must be done within a few days.

"First, a number of Mr. Burbank's most trusted employees go through the orchard, tasting every seedling, and those which possess obviously superior qualities are indicated by tying a white string around the twig. Mr. Burbank then personally inspects these and selects only those which he considers of special excellence. The process of elimination is carried still further, and as the result of the season's work perhaps fifteen or twenty different kinds of cherries are preserved, all the rest being relentlessly destroyed. The same method is pursued in testing the enormous number of plums, peaches, apples, prunes, apricots, quinces, grapes, etc., which Mr. Burbank has under cultivation every year.

The Most Remarkable Tree in the World.

"We were also greatly interested in the experiments at Sebastopol with nut-bearing trees. Mr. Burbank showed us a hybrid chestnut which he considers the most remarkable tree in the world. This tree, not over ten feet high, pro-

duces six or eight crops of chestnuts every year, blossoming and fruiting, blossoming and fruiting, from January until December. So rapid is its growth that one of the nuts placed in the ground will produce a tree which will bear fruit in six months from the seed.

"Of more practical value, perhaps, than his hybrid chestnut, though not so spectacular, is his success with his hybrid walnuts, of which we saw numerous specimens in all stages of growth. These trees, the result of crossing the English walnut with the common New England walnut or the black walnut of California, possess remarkable qualities of rapidity of growth, hardiness, productivity and timber value. We noticed some of these trees, only about a dozen years old, which were eighty feet high, with a trunk diameter of two feet. The wood is characterized by a hardness of texture and a fineness of grain which make it exceedingly valuable for manufacturing purposes, while their rapidity of growth and adaptability to varying climates make it certain that these trees will be in great demand for timber culture, especially in reforestation denuded areas."

The readers of Green's Fruit Grower will be interested in what Mr. Gleason says about the wonderberry:

"The wonderberry—or 'sunberry,' as it was first called—is the product of a cross between two species of Solanum, that botanical family to which the tomato, potato, eggplant, pepper and nightshade belong.

Mr. Burbank and the Wonderberry.

"The new plant differs entirely from its parents, both of which are valueless and are classed as common weeds. The berries are precisely similar in shape and color to large blueberries, which they also resemble in taste when fully ripe, and are produced in great profusion, the plant continuing to bear throughout the season until killed by frost.

"Being an annual, it is raised each year from seed, and its qualities have become so firmly fixed that it shows no tendency to revert to its original type. Two years ago Mr. Burbank disposed of the wonderberry to a well-known horticulturist of New York.

"Mr. Burbank says:

"It is without question the best berry ever introduced to this world, as thousands on thousands of people found last year and thousands more will find this season. It is almost as difficult to adapt people to a new product as it is to adapt a new product to the people. The potato, tomato, eggplant, pepper and numerous other valuable food plants belong to the same family as the wonderberry. I was warned as a boy not to eat tomatoes, as they were poisonous, and they were grown for years as a curiosity and not considered fit to eat. The potato when introduced into Europe was pronounced poisonous and people could not be induced to eat potatoes for a long time, especially in Ireland, until a great famine came and they were compelled to eat them.

"I know several people who now eat the potato without any symptoms of poisoning, also the tomato, the eggplant and the pepper. The wonderberry has been examined by one of the best official English chemists, who pronounces it, both in foliage and fruit—in fact, the whole plant—as being absolutely free from any poisonous principle whatever, while in nearly all the other solanaceous plants there is more or less atropine and alkaloids which are absolute poisons. The facts in the case are these: There is more poison in one of the leaves of the ordinary cultivated potato than in a whole acre of wonderberries; there is more poison in one potato which has been exposed to the sun until it turns green than in ten acres of wonderberries."

What Socialism Disregards.

Socialists plant themselves firmly on the postulate that present economic conditions, the unequal distribution of wealth, are responsible for the differing conditions of men. The redistribution of wealth would make all men equal, all men happy and contented. The Socialists overthrow, by paying no attention to it, the belief somewhat widely held that it is the inequality in the capacities and in the ambitions, temperaments and dispositions of men that have made economic conditions unequal, that have brought the reward of accumulations to the industrious and the thrifty, and have visited the penalty of narrow circumstances upon the improvident and the prodigal.—From Charles R. Miller's "Why Socialism is Impracticable" in the April "Century."

"Reason and speech are the bond of society."—Cicero.

Letters to My Son.

Written for Green's Fruit Grower.

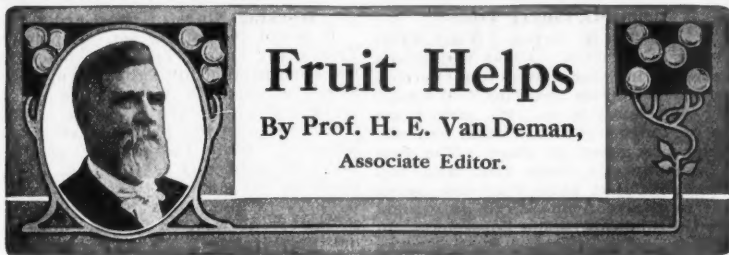
Dear Son Charles, Vershire, Vermont:

Your letter received. In reply I say to you plant a commercial apple orchard by all means. Do this as soon as possible. Thoroughly prepare the ground by deep plowing and cultivating. Select a site on elevated ground, not too steep to wash badly, sloping to the north or northeast. Such a site will insure proper air drainage, and protect you from loss of fruit by reason of late spring frosts. An orchard of five to ten acres on the farm will not only be a source of revenue, but will beautify the place and aid in a ready sale, should you ever desire to dispose of it. You ask if there is a possibility of apple growing becoming overdone. I should say no, not in your time, at least. I can remember when I lived in Westfield, Mass., in 1859-60, that good winter apples were selling at one dollar (\$1.00) a bushel, with hundreds of bushels lying on the ground and others going to the cider mills. I bought a barrel of cider that fall for one dollar. At that time there was very little grafted fruit and no young orchards in that vicinity. The orchards were seedlings of poor quality. In the spring of 1859 I saw a farmer cutting down an old orchard, trees fifteen to twenty inches in diameter, and cording the wood to sell for the making of plants and bobbins. That fall I paid five cents for two Porter apples at Worcester, Mass. The condition is about the same now as then, in some ways. Now as then there is much inferior fruit grown that will not sell on the open market. In my locality there are very few young orchards, and the old ones are very old and much neglected. The people who live on these farms are all renters, the owners of the land having moved into the villages or to the city of Chicago. Renters are not planting trees or otherwise beautifying the farms. You see by this that fruit growing is no longer in the hands of the farmers, not in this locality, at least. The people who plant orchards and care for them by the improved methods will reap a good reward for their work and outlay. Farmers' methods of growing fruit no longer prevail. The requirements of the markets are more exacting, and the far-west growers have taught the eastern producers the lesson that the fruit must be assorted as to size and quality and placed in neat and suitable packages. Those who cater to the wants and whims of the public are the ones who secure the top prices and get the trade. It is so of everything we buy at the store now days, everything being put up in neat cartons and packages, to attract the eyes of the purchaser. Vermont is noted for its fine winter apples. In fact all the New England states are noted for their Baldwins and Rhode Island Greenings. I say plant a commercial orchard on your farm. Give it your attention and thought. Cultivate thoroughly each year, at least until the trees come into bearing. Do not plant any trees other than apple trees in the apple orchard. Place the trees thirty feet apart each way. Potatoes or any worked or hoed crop may be grown between them. Keep the ground clean up to the time of laying the crop by. See to it that there is no grass or weeds around the trees in the fall, to harbor mice and the trees thus be girdled during the winter. Bank up with earth each tree before winter sets in. I prefer two-year-old trees, well branched, when received from the nursery. Trim the roots and cut back the branches half or more, removing the center leader, leaving four or five branches well distributed to form the head. I always carry a pruning knife in my pocket and cut out at any time any branches which cross the center. Do not plant switches, as they are too small to cultivate in the open field with the growing crop. I have had very good success with fall planting, but prefer spring planting. It may be different in your locality. I do not trim the fall-planted trees until the next spring. I would plant five acres as follows, although it might be better to plant fewer varieties—would do so were I planting a ten-acre tract: One acre, fifty Baldwins; two acres, one hundred Black Ben; one acre, fifty King David; one acre, fifty Delicious. In your old orchard you have summer apples, and as there is always an abundance of these and fall apples in the neighborhood would not plant of this class. You write that you wish to plant a pear orchard, and ask for information as to this. I will try and advise you in my next letter.

Your father,
Dr. James Rigg, III.

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"Bad luck attends a loveless marriage."



Fruit Helps

By Prof. H. E. Van Deman,
Associate Editor.

The Lake St. John Region.

In the May number I mentioned a region in northern Louisiana where there are opportunities for making hundreds of good homes on the shore of a beautiful lake, where now are only a very few white people and swarms of negroes of the lowest type. Many readers have written me to learn more about this place, asking all manner of questions about where it is, the nearest towns, the social advantages, schools and churches, price of land and many more such questions as are entirely reasonable that anyone should know before wanting to go to see the place where they might locate.

I am not a land agent, have no financial interest whatever in the region mentioned, nor have any of my friends, and it would be a great task to reply to these letters, individually, but it may be well to give some of the particulars to the inquirers and others who might wish to get homes in a mild climate. There is a constant desire to move southward to escape the severity of the northern winters and to where the more tender fruits can be grown. This is entirely reasonable and in some cases it is a matter of life or death to those who are weak physically. All that I may say of the region is from an impartial view and only suggestive, except in so far as I have positive knowledge of it from visits made there and from having spent much of the last five winters near there. The company I organized and of which I am president and general manager has a tract of over 2000 acres within five miles of the lake along which the land in question lies, and there we are planting one of the largest pecan orchards in the world. This was the only reason that caused me to become a winter resident of Louisiana and to know by years of personal experience what are the pleasures and trials to be met in living there. All things considered and to express my convictions in a few words I may say, I like it.

Objections.

That there are objections to living in Louisiana there is no doubt. So are there to living in the north, the east and the west, yet all the country is suited for the highest type of human life and we have it, with few exceptions. We have reason to be proud of our country, notwithstanding all its faults, political and otherwise, and everyone should strive, each in his place, to do his duty and make this country and the world richer in the things that make it better. These are some of the thoughts that ran through my mind as I have stood on the shore of beautiful Lake St. John, repeatedly, and saw the whole landscape desecrated by cabins that were usually inhabited by the lowest class of negroes, with only a few real houses, a mile or more apart and the most of them occupied by tenants who cared nothing except for what they might make from a single crop of cotton or rice. What a wonderful opportunity to establish beautiful, healthy and even luxurious homes! Lake St. John, which lies in Concordia parish, is only one of the many great stretches of water that the Mississippi river has left in its fickle changes in passing through the rich delta country to the sea. These lakes are usually of a horseshoe shape and sometimes their waters are shallow and connected with the river during its higher stages, as is Concordia, the one our plantation fronts upon. But St. John is deep and its waters pure and not in any way affected by the river, the great levee intervening. And there is not the slightest danger of overflowing, for the river has long since changed its course so that it is not wearing that way. The drainage from the lake is into the Tensas river and so on southward to the Red. The land along these lakes is usually the highest of any in the region, having been made so by the great overflows for ages past, as is the case in all alluvial regions. It is so along Lake St. John and is also rich and of unknown depth. Most of it is very sticky—almost like wax when it is muddy and gets quite hard when dry. However, it is worked with all ordinary farm tools and plows scour easily. There is not a stone, gravel, pebble or coarse grain of sand in the whole region for many miles. Some good stone and sand would be an advantage but they are usually

found in the hills and there is not a hill in sight, except across the Mississippi where the bluffs of Natchez may be seen miles away.

The Crops.

The crop that has been grown for many years to the exclusion of nearly all others, is cotton, but it has been so affected lately with Boll weevil that the planters have almost abandoned it and are growing more corn and cow peas, some oats and Japan clover and large areas in rice. There is a decided interest in cattle and hogs. The woods make a sort of cattle heaven, winter and summer. Poultry and bees are profitable, but very few are kept. The people are too ignorant and careless to even

as far. One tree that I pass when I go to Natchez to trade was planted more than 100 years ago by one of the old Spanish pioneers, has borne fourteen barrels of splendid nuts in one year. It is still vigorous but somewhat injured by quantities of mistletoe that has been allowed to grow on it. I have grafts from this tree now growing in our nursery near Ferriday. As yet there are almost none of the choice varieties of the pecan planted in all that region, although every acre of it is suitable, except the 1000 acres that I have set, and scarcely any of those planted are old enough to bear. However, the few nuts on the grafted trees that are old enough prove beyond doubt that all the tenderest, largest and richest varieties are at home there. There is scarcely an insect or other troublesome pest to injure the trees or nuts. Thousands of bushels are gathered from the wild trees almost every year. Hogs fatten on them and the turkeys and birds that can feed on them have a rich harvest from nature's hand. Five acres of choice pecan trees would make a family a good living when grown to maturity and ten acres would be a fortune and for generations to come. They will not yield much returns under ten years from planting but from that time on there need be no concern. The ground may be used for cultivated

their big trunk line in operation this will be one of the great steel highways from the lakes to the Gulf. The residents of Lake St. John front will then build good roads, where now all is deep forest and mud, direct to this line, or, maybe, have a short branch or trolley for their use. The land, which is now held in large tracts of 1000 to 5000 acres and more may be bought up and divided into hundreds of small holdings and occupied by the owners. From ordinary farm prices now asked it can and should be gradually changed into almost priceless value for the homes of cultured people. Schools and churches and probably a town or two, with all the industries that such people always have, will be where now are cotton and rice fields, and nigger hovels. A great boulevard may run along the lake front. Launches will ply the water. Beautiful boat houses and water lily gardens will adorn the landings. Rose bushes, graceful vines and green grass will cover the banks of bare soil. Stretching back to the forests will be long lines of spreading pecan trees that will be a source of surprising wealth, even to the owners. This is a vision of air castles, at present, but they may materialize. Stranger things have happened. Surely there are good foundations for them. It is wonderful how homeseekers are going southward. Only last night I was talking with the chief of the industrial department of the largest railway system in the south, with headquarters at Washington, who is one of my personal friends, and he confidentially told me that they had more business than they could attend to properly. People want land and our own people should get the best of it now and hold it for themselves and their children forever. Colonies should be formed of people having practically uniform ideas on the vital subjects of education, religion, temperance, the dignity of labor and all that is good and be prepared to apply them in their communities. The society must be made for there is none there now, except in the towns and it is not worth much there as yet.

The Negro.

The negro problem in the south is a very serious one. Since he has been eliminated from politics there are less troubles than before, but there is enough at best. The negro is the greatest hindrance to prosperity in the south. He has been a menial from earliest history and will be so to the end of time, because it is not in him to rise to the level of the white race. He will usually work rather than starve and that is the only reason, with some notable exceptions, of course. The northern people think the southern negro is terribly abused, which is a woeful mistake. As a rule he is better treated than he deserves, and all that is needed to open the eyes of the blind man from the north is a southern residence of six months. The southern people pity the negroes and bear with their vice and general meanness far more than the northern people who move south. And they are to be pitied more than hated. Their labor is cheap but they get all it is worth, often more, because it is poor and almost devoid of intelligence and faithfulness. But there are good negroes and I am proud of some that have been tested out and found worthy on our plantation. The rest must be patiently endured and helped to better lives so far as is possible. Slavery was bad but it is not to blame for all the many vices of the negro. He is here and it is the duty of the white man to elevate him but he will never be and should never be to a social or political equal.

Answers to Inquiries.

E. P. F., of Central Kansas, states that the Babbitt apple is doing very well at his place, the trees being very strong growers, bear well and the apples are large and good. This variety is rarely grown and may be well worth far more extensive trial than it has had to date. It is of a good red color and in some respects resembles Baldwin but is not enough like it to be mistaken for it. A good red winter apple is always needed.

G. S. S., of Pa., asks about the color of the Sutton apple, its quality, etc.

Reply: Sutton is a variety that is a competitor for favor as a market apple in the northern states, where Baldwin is popular. Its size and shape are medium, about with Baldwin, and in color it is much the same, being dark red over a greenish base which turns yellow when fully ripe. The red sometimes becomes solid but not generally. The quality is superior to Baldwin, as judged by many, being subacid and well flavored. The tree is quite compact and upright in habit and bears well, although there are complaints of its behavior in this respect. This is also true,



The upper photograph and the lower one above were taken at the opening of a new park at Rochester, N. Y. This park fronts on Lake Ontario. It is this large body of water which aids greatly the fruit growers of this section, modifying the temperature and preventing extreme changes of temperature in winter and late frosts in the spring, thus saving many fruit crops which might otherwise have been destroyed.

live comfortably, yet they are surrounded with abundant natural advantages. All the vegetables suited to a temperate climate thrive. Cabbage is grown in the open all winter and lettuce, beets and other half hardy things may be treated likewise. Melons and all things that delight in long and warm summers are at home.

The Fruits.

Of the fruits the fig is the most productive and sure of any. The trees are sometimes injured by cold when young but there are old fig trees standing where houses have been; they have been bearing abundantly, with no care whatever, since the days of slavery, when the few land owners lived like princes. I have planted several thousand trees on our place. Peaches do very well and so do the American and Japanese plums. The Japanese persimmon flourishes wonderfully. Pears are doubtful and apples are far out of climate, although a few trees may be seen struggling for existence in the rich warm soil. Grapes grow luxuriantly but need plenty of spraying for mildew and rot, except those of the southern muscadine type, which flourish and bear without any trouble. The dewberries and all of the southern blackberries grow like weeds, but strawberries have to be nursed through the long hot summers. We have all we need to use at our own place, but few will take the trouble to grow them.

The Home of the Pecan.

Of all the nut trees that grow in America or elsewhere there is none that equals the pecan and this alluvial land and mild climate is its native home. The forests are dotted all over with the trees. Some of them are 150 feet high and where growing in the open they sometimes spread their branches almost

crops until the trees need the space and then it can be seeded to Bermuda grass and pastured forever afterward. This is one of the richest pasture grasses that grow.

The Wood Lands.

The timber is a mixture of oak of several species, ash, elm, honey locust, pecan, bitter hickory and an abundance of sweet gum and cypress. The last two are the trees mostly used for lumber and there are none better anywhere. There are millions of feet standing within sight of Lake St. John, yet no mill is nearer than five miles. The best of houses might be built of the lumber, bricks burned for foundations and chimneys, and wood for fire is plenty to last for all time. During the cool and rainy weather in winter it is cheering to see the blaze and feel the heat from the great fireplaces that are and should be built into every house there.

Water.

There are no springs whatever and although water is found at about fifteen feet deep everywhere it is not very good. Cisterns are the best and are in common use. There is no water better for drinking and household use than that from the clouds. Rains are abundant and sometimes too abundant.

Transportation.

The matter of transportation is one of the main features of any desirable place to live. The main railroad line within reach is about four miles distant from the lake, although the station now used is at Ferriday some eight miles away. That is the end of two divisions on the line of the Iron Mountain and Texas Pacific roads, leading from Saint Louis and the north generally to New Orleans. When the Panama canal is done and the Gould system gets

of the Baldwin and it would be well to plant both varieties in the extreme northern states.

E. V. H., of Indiana, has a tract of hill land that he wants to plant to fruits. Some of it is very steep and cannot be cultivated for this reason. From his description of the soil and the timber growing on it it seems to be fertile and well adapted to the growth of fruit trees, especially apples, peaches and cherries. He thinks of planting the largest part with peaches.

The frost is least likely to injure the peach crops on the highest land, and that is the place to plant this fruit. The steep land may be planted to apple trees and seeded to grass with the idea of keeping it mowed often and used as a mulch. This plan will prevent the washing of the soil and it is not an expensive way to handle an orchard.

As to varieties for that section, the Jonathan and Grimes apples, should be very suitable and the Delicious is one that I would plant. Of peaches the later varieties will probably pay better than the early ones. Gold Drop is a good yellow peach but it has no red cheek as most varieties have. However, it sells very well and is of good quality. The Crawford Late would probably be injured by the winter to some extent. Salway is safer to plant there and is a fine, large yellow peach, ripening late. Heath Cling may do very well and is one of the best late peaches.

J. M. C., of Chattanooga, Tenn., is thinking of planting apples, pears and cherries on Lookout mountain at an elevation above sea level of about 2200 feet. He is uncertain of the climate at that elevation and asks for advice.

Reply: As I have been on Lookout mountain and had an opportunity to notice the growth of only a few fruit trees on the old battlefield I cannot advise from any considerable first hand information, but I have no doubt whatever of the suitability of that place for fruit, provided the soil is good. Elevations of over 3000 feet above sea level are known to be excellent for apples and other fruits in North Carolina and elsewhere. I have seen splendid apple orchards at 4000 feet and even higher. So far south as Tennessee there would be no risk whatever in planting the tree fruits mentioned, apples, pears and cherries, and others too. But good soil must be got if success is to follow.

It might be well to plant early apples instead of late kinds. Chattanooga would consume all the early apples that a large orchard would produce. Such tender fleshed kinds as Yellow Transparent and Wealthy would not bear long shipment but they would not need to be even put aboard the cars. These are very early bearers and may be planted twenty feet apart.

As to pears, they will do about the same as apples. There is no variety that excels Bartlett for profit and few that equal it. Seckel is good but it is small. The tree is quite resistant to blight.

The Richmond, Montmorency and Morello cherries will do well there and should be on market.

Dear Sir: Will you please advise something for a cherry tree? The blossoms develop without any indication of insects about the tree. When the cherries begin to grow yellow and should get real pink, a black spot appears on them, and in a short time they grow black, and on some I find only the stone left attached to the stem. It seems to me it must be due to something deposited by some flying insect. Some that did ripen were decayed inside. When is the best time to order fruit trees?

Reply: It is probable that the cause of the trouble is a fungus disease that is called "ripe rot." The remedy is spraying with bordeaux mixture. This must be done when the fruit is yet green to prevent the spores of the fungus from developing when they fall on the fruit. It will also do good in killing the spores of diseases which affect the leaves, making dead spots on them. Arsenate of lead is for the destruction of insects that eat foliage and would be of no advantage in this case.

Prof. H. E. Van Deman: I have a seedling pecan tree which has been bearing about six years but the nuts, although very large, are never filled with meat. A great many fall before time for maturity, and those that remain until fall rarely have anything in the shell except shriveled meat and a corky substance. It has a thin shell and about the same size as the Columbian shown in the catalogues, being two and seven-eighths inches long and two inches in diameter. Other trees all around in the same field in close proximity bear and mature their fruit every year, although the nuts are small.

What can you advise to be done with this tree to make it bear better and fill out its fruit? Would girdling in June do any good? And how should that be done? Upon what stock would you graft the currant? Will the Red Cross currant succeed in south Mississippi? The wild currants grow and bear here, and are a very excellent early fruit, now getting ripe.—W. C. Johnson, Miss.

Reply: This pecan tree is worthless except as a shade tree or a stock upon which to graft some good variety. The nuts never will fill out, which is also nearly true of the Rome or Columbian variety that has been extensively propagated and sold by some nurseryman. A pecan nearly three inches by two is a monster but as it is about all shell and almost no meat it is worthless except as a curiosity.

Currants are almost never grafted but are propagated by rooting cuttings. However, grafting or budding them is possible, and probably, very easily done, although I have never known it to be tried. Cultivated currants are suitable to a cool climate and do not succeed in a hot climate like that of Mississippi and I am surprised to hear of wild currants being there. I have traveled in many parts of that state, especially on horseback in the sunflower country and I never saw a single currant bush, wild or cultivated.

Green's Fruit Grower: I am contemplating an apple orchard and am seeking information relative to the cost of trees, varieties and cultivation. Is it practicable to employ a skilled man for this work and can you give me an idea as to what salary he should demand? There is an excellent opportunity that I know of and I wish as full and complete information as possible.—F. C. Myers, Georgia.

Reply: Without knowing where the prospective apple orchard is to be planted it would be useless to suggest varieties for planting, because there are great differences in their adaptability to the various sections of the apple growing country. In northwestern Georgia there are some very good sections for growing apples, especially in the rich mountain valleys and slopes. Indeed that is one of the best paying places to grow early apples in all the country and there are splendid market demands for this class of fruit. Good early apples are never abundant. One of the largest and most experienced apple dealers in New York city lately said that if he had the time to devote to apple orcharding he "would go to northwest Georgia and plant a large tract to Yellow Transparent, Oldenberg and Wealthy, because there is more and quicker money in them than in any of the best winter apples." This may be true and this man ought to know. These three varieties are wonderful bearers and begin with the very earliest, Yellow Transparent and the other two grown so far south as Georgia would be gone before the apples from other sections would be plenty in market.

Good men fit to manage large orchard enterprises are hard to get because they are usually engaged in their own business. Such men should not get less than \$1200, annual salary and a house and what fruit and vegetables his family would need.

Green's Fruit Grower: How can I grow our common red cedar trees from seed and how and when should the seed be sown, and also seeds of hemlock and pine trees? What is the most favorable season in the year for transplanting the young trees?—W. Irving Lincoln, Mass.

Reply: Seeds of all the evergreen trees should be sown under lath sheds which exclude about half the direct sunlight. They can be sown as soon as gathered or kept until early springtime. They should be sown very shallow and covered with extremely mellow soil or leaf mold from the woods. When they are one year old the plants should be transplanted into close nursery rows and kept very clean of weeds. At the end of the second year they should be again transplanted and given more room. After that the little trees will be ready to be planted permanently.

H. E. Van Deman.

"We should mark on moral qualities, not merely mental attainment or proficiency," says Elbert Hubbard in speaking of schools, "because in the race of life only moral qualities count."

There is one moral quality that I sincerely wish could be taught thoroughly in our schools. I wish there might be a course in it every year from kindergarten to the last year of college, and that quality is "consideration for the rights and privileges of other people."

About My Cherry Trees.

Mr. Charles A. Green: Your Fruit Grower has arrived. I was very much interested in your letters on cherries. You say "Cherries are ripe." We have only two cherry trees. We picked one tree on the last week in May, and one in the first week in June. The first one was once a large tree, and had some limbs that hung very low, being close to the road one large limb hung over the sidewalk. The boys could not reach them, but threw a good many shells and stones up at the tree, and a good many went over in our neighbor's garden, and she did not like it, so I cut that limb off. Another large limb hung over a neighboring woman's garden, and she said it shaded her garden too much, so I cut that one off. That leaves that tree rather one sided, the top limbs very high and the cherries far away. But with the help of a long ladder I got a boy to go up and pick the cherries. He picked twenty-five quarts of real ripe red cherries that we sold at 10 cents a quart. We had another tree on our own place but close to the road and the boys knocked down a good many with sticks and stones, and the birds helped themselves to all they wanted, but I did not mind what the birds took, but the boys were not satisfied with what they could knock off. One night they got up the tree when the cherries were about half ripe and broke off a good many limbs or small branches. I thought they had gone about far enough on that line, so I put some barbed wire on the top of the fence. That kept them from getting over. So we saved our cherries. Then the boys wanted to pick the cherries for me. But I told them I would have to pick them myself, for I only wanted the ripest and best. I found the best was on the outside of the tree. It was quite a job for me to pick them as I am nearly 78 years old. We tied two ladders together so I could pick the outside where the best and ripest cherries were. We raised our ladder up on the outside of the tree and let it drop gently on the limbs so as not to hurt the tree or knock off too many cherries. I picked the outside of the tree first and that gave those inside more time to get ripe, and I picked and picked until I picked over 100 quarts off that tree, and sold them at 10 cents a quart, while some were selling the same kind at 6 cents a quart, calling them white cherries. They looked white because they were not more than half ripe. I don't believe in boys picking my cherries if I can reach them myself, for they will pick some speckled and some that are not ripe. I don't know the name of these cherries. Some call them White cherries, but I know if they are left on the tree till they are ripe they are more red than white. I am sending you one of our church papers. You may like to read it.—Geo. Bunce, Md.

Editor's note: This good letter from our aged friend indicates how ravenous children are for fruit. At my home passing boys eat cherries from my trees before they have colored. Since cherries are so easily grown it is a pity that all children cannot eat all they desire. Let us plant more cherry trees for the good of birds, boys and girls.

Insect Mechanics.

The deliberate use of a tool by a little sand-wasp might well be supposed to indicate reasoning power. A wasp has been seen to dig a hole in the earth and deposit an egg therein, together with a spider, which she had stung into paralysis, to feed the grub which should be hatched in due time. Then she filled the hole with sand or earth and jammed it down with her head.

When at last the filling was level with the ground, she brought a quantity of fine grains of dirt to the spot, picked up a small pebble in her mandibles, and used it as a hammer in pounding them down with rapid strokes, thus making this spot as hard and as firm as the surrounding surface. Before the watcher could recover from his astonishment at this performance she had dropped her stone and was bringing more earth. In a moment the watcher saw her pick up the pebble and again, pound the earth into place with it. Once more the process was repeated and then the little creature flew away.

The whole of this performance, says "Harper's Weekly," was so unexpected that the naturalist who watched it might have failed to convince skeptics that he had not been deceived but for the fact that so respectable an authority as Sir Herbert Maxwell has reported similar behavior on the part of a wasp of the same species under similar conditions.

The horse population of the world is estimated at upward of 111,000,000, of which about 43,500,000 are in Europe, 28,000,000 in North America and 11,000,000 in Asia.

Working Notes of the Garden.

It is not too late to set out peppers. This plant should never be placed in the open ground until the thermometer stands at about 60 degrees through the night and all danger of frosts is past. Moles in a garden prove an intolerable nuisance. While they may be trapped, the only sure way is to inject bi-sulphate of carbon into their runs.

The very low prices obtained for potatoes by the western farmers last year has discouraged many of the growers, and it is believed that the acreage this year will be much smaller than years previously.

The bugs get busy now and if the garden is neglected the crops will soon show the effects of their ravages.

Keep the wheel-hoe going all through the month, particularly if the ground is dry.

It is better to give the crop a thorough soaking once a week, than to sprinkle lightly over it. Light sprinkling tends to keep the roots near the surface soil.

Some plants cannot be thoroughly weeded with the hoe. In these cases every weed should be carefully plucked out by hand.

In thinning beets the extra ones need not be thrown away. If set out in fine soil and thoroughly watered they will grow well.

If the strawberries have been picked two seasons, spade up the beds and sow the land for some late-planted crop.

Do not set out fresh strawberry plants next spring in a bed that was occupied by the old plants this year.

If you observe a strawberry plant suddenly wilt, you will generally find a nice, fat grub at the end of the roots when you dig it up.

Keep a close watch for the cut worms. Plants that are newly set out may be protected by making a collar of stiff paper and inserting it in the ground about the plant.

A half teaspoonful of paris green added to heavily sweetened water or molasses will kill the cut worms, but care should be taken that the fowls cannot get at it.

Anybody living near a good sized town can do a fine business in sweet-corn by delivering it fresh every morning to customers direct, and get nearly twice the wholesale price.

Arsenate of lead is replacing paris green in spraying potatoes because it adheres to the foliage better.

Arsenate of lead is also death to the beetles that injure asparagus, and in fact may be used to advantage for nearly all crawling things in the garden.

Spraying vegetables should be commenced the very moment the insects are seen. Every day, thereafter makes the work of observing them more difficult.

In transplanting plants it is much better to fill the hole after the plant is set, the soil added gradually, than to water after the hole is filled.—"Farm World."

At Hazelhurst, Mass., there was buried with appropriate ceremonies by Mrs. Miles Cannon and her children their favorite hen, Polly, seventeen years old. She was believed to be the oldest hen in the world. According to Polly's owner, she laid more than 3000 eggs and raised thirty-five broods of chickens.

A DETERMINED WOMAN Finally Found a Food that Cured Her.

"When I first read of the remarkable effects of Grape-Nuts food, I determined to secure some," says a woman of Salisbury, Mo. "At that time there was none kept in this town, but my husband ordered some from a Chicago traveler."

"I had been greatly afflicted with sudden attacks of cramps, nausea, and vomiting. I tried all sorts of remedies and physicians, but obtained only temporary relief. As soon as I began to use the new food the cramps disappeared and have never returned."

"My old attacks of sick stomach were a little slower to yield, but by continuing the food, that trouble has disappeared entirely. I am to-day perfectly well, can eat anything and everything I wish, without paying the penalty that I used to. We would not keep house without Grape-Nuts."

"My husband was so delighted with the benefits I received that he has been recommending Grape-Nuts to his customers and has built up a very large trade on the food. He sells them by the case to many of the leading physicians of the county, who recommend Grape-Nuts very generally. There's some satisfaction in using a really scientifically prepared food."

Read the little book, "The Road to Wellville," in pkgs. "There's a Reason." Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Jay Gould Happiest When He Hadn't \$1.

"I knew Jay Gould when he was in sore need of 70 cents and I knew him when he had \$70,000,000, and I am confident that Mr. Gould was happier when he hadn't even a dollar," said John Burroughs, the celebrated naturalist and scientist, in an interview on the "making of money." Mr. Burroughs is spending a few days here as the guest of Mrs. Sarre, a wealthy woman studying poultry at Cornell.

Mr. Burroughs also said: "I do not believe in the doctrine attributed to John D. Rockefeller, that if you want to make your wife happy all you have to do is to give her plenty of money. I do not believe that possession of money and happiness are synonymous.

"The great problem of to-day is the making of money. It is unquestionably the occupation that engages the minds of the vast majority of people. But from what I have seen of life and those leading it, when one has obtained a competency money is superfluous, just like an excess of fat that is not needed to round out the figure to give it a handsome appearance. Piling up wealth then becomes like piling on flesh, and greatly hinders the employment of the best things of this life.

"I know millionaires and millionaires, and know very few happy ones. True, Mr. Carnegie seems to be an exception, because he is different from many other rich men. He is trying to get rid of his money, and he takes keen delight in doing good with it. But, when even one disposes of wealth, if there is the consciousness that in acquiring it the weaker creatures have been overcome and saddened, I think there must be a tinge of regret in helping others with this very fruit that has been obtained at such cost.

"I sat behind Jay Gould in school and once he wrote a composition on a slate for me when I needed ideas. That day he needed seventy cents and I gave the sum to him for two old school books—one a German grammar. I saw him later in life, but I do not think he was happy. Why? There was that money fire blazing in his eyes, and I am sure it reached his brain and consumed his life, sending him to an untimely grave.

"If Mr. Rockefeller has given out the doctrine that a man can make his wife happy with money he is making a declaration that I believe American women and women all over the world will resent. They want love first of all, if they are provided with the right instincts.

"Money, of course, is necessary to provide the comforts of existence, but cultured people—I say cultured people, mind you—can doubtless be contented with books when they cannot buy automobiles."

Fruit Requires the Bees.

Fruit growers are beginning to realize the necessity of bees for the proper fertilizing of fruit bloom, and that the two industries are mutually interdependent. If anything, the fruit grower derives much more benefit from the bees than the bee keeper himself. A number of years ago the veteran bee keeper and queen breeder, Henry Alley, of Massachusetts, now deceased, was obliged to move his bees away, owing to complaints of fruit growers, claiming them to be a nuisance, but after a year or two they were glad to get him back again, because of so little fruit in proportion to the number of blossoms.

I have in mind an account I read in one of the bee journals of a man in New York state, who bought a farm and set it out to fruit trees, expecting to flood the market with fruit. After a few years' waiting and getting no fruit, he was obliged to sell out to another. The second man thought he had a bonanza, but soon found out his mistake and sold. The third buyer was a bee keeper and wanted it as a location for his bees, as there were none around there, and at the same time mistaking the cause of the barrenness of the orchard. The result was that the first year he harvested thousands of barrels of the finest fruit ever raised in that section, and the orchard has continued to bear since.

Money in Strawberries.

The most profitable plot of ground we had this season was a strawberry bed, six rows a little less than a hundred feet long, says "Farm Poultry." A little over \$45 worth of berries was sold from this bed, and we ate a good many, put up a good many, gave away some, and from 150 to 200 quarts were lost by berries rotting on the vines where the vines were thickest. The varieties were Glen Mary and Sample. This loss was principally where the vines were thick and shaded the berries.

"Verse itself is an absurdity except as an expression of some higher movement of the mind."—Lowell.

ABOUT EVAPORATED APPLES.

The evaporated or dried apples produced in the extensive orchard region of western and central New York have been for many years a staple article of commerce and a valuable food supply.

Evaporated apples are more readily transported, are less in bulk, and can be kept in store with less difficulty and expense than green fruit. When the apples are dried the water is expelled, leaving the syrupy juice in the fruit cells in a condition that renders the fruit available for culinary purposes when green fruit is not available, says H. C. Maine, in N. Y. "Tribune."

A handful of evaporated apples, which can be kept without care in a paper bag for months, will furnish a valuable and healthful food by the simple process of soaking and stewing. For all the adaptability and great usefulness of evaporated apples the product has not received the attention it deserves from housekeepers or the public press. While the wheat crop, the green apple crop, the potato, and bean crops receive marked attention, the staple product of the evaporators receives little notice except from trade journals. One reason is, perhaps, the extent of the business and the lack of knowledge by any single individual of this valuable resource and great factor in the wealth of the state.

Many years ago it was made known that the most important diplomatic communication of our minister to Greece related to the production of the Zante currant. At the time over-wise persons smiled, thinking the matter was

has not been reached. Handling by machines has insured the utmost accuracy and cleanliness. Evaporated apples are clean and sweet, with a rich fruit aroma that becomes fully evident upon proper cooking.

The railways have helped the orchard regions and the evaporators have greatly aided the railways, adding immensely to the total of commerce. When the product of the evaporators is fully appreciated orchard values and railway values will be greatly increased. The business has already become so vast and important that the state has regulated it to a degree, fixing a standard of the amount of moisture that may be retained in the dried product. As yet, however, the supply of evaporated apples is far below the natural demand. This is especially true in this year of scant fruit supply.

Indispensable at Sea.

Evaporated apples are not only a valuable resource to the housekeepers but are indispensable at sea. One of the large purchasers of evaporated apples is the navy department. The battleship squadron will take on board fifteen thousand pounds of evaporated apples before sailing for the Pacific. These supplies will contribute greatly to the health of the crews. For sailing ships, evaporated apples offer the best and most adequate protection against the ills of sea service and supply the lack of fresh vegetables.

The consumption of evaporated apples must always be large in the United



Girls preparing apples for evaporation with the aid of ingenious machinery in western New York.

of trivial importance. In reality the communication was of more value than all the political discussions that might arise from our relations with the kingdom of Greece. The Zante currant is on the shelf of every grocer, and it is better known to the housekeeper than the more valuable evaporated apple, fresh from the great orchards of New York.

Capital Invested Large.

The capital invested in the production of evaporated apples is large, and the industry affords opportunity for remunerative employment in rural districts devoid of other manufacturing and in the suburbs of large towns in the orchard area. The existence of the evaporating plants adds greatly to the value of the fruit farms, offering a steady market and reducing the waste and loss from slightly imperfect fruit to a minimum. Formerly a severe gale of wind near packing time entailed heavy loss upon the fruit grower. To-day the large, mature, but slightly bruised apples are immediately pared and dried for the market. The best and largest apples are thus saved and the orchardist is remunerated. The evaporators are competitors for orchard products with all the buyers of green fruit, purchasing whole orchards, evaporating the large apples and devoting the small ones to other purposes. Most of the apples are sliced in rings across the core, which has been removed in the paring process. In some cases choice fruit is quartered or dried whole for special orders. The best sorted fruit is used in both processes and the fruit is a product sought by the best houses in the country.

The inventive skill displayed in machinery for the handling of apples for evaporation is marvelous. Most of the "intelligent" machines for handling apples are the invention of men engaged in evaporators and who have had practical knowledge of the requirements. A machine that puts an apple on its stem end before slicing may be termed "intelligent" without serious violation of correct speech. The end of invention

States. The product is especially in demand in the south and southwest, and all the great region west of the Mississippi. The European demand is also large, but the home market will always remain the most important.

Transportation and storage are so simple that evaporated apples are handled with less risk than almost any other commodity. This condition is well appreciated in the region east of the Mississippi, where the greatest trade has been up to recent years. The eastern region, not far removed from the apple belt and the first to become acquainted with the many uses of evaporated apples, has always been a large consumer and uses a large percentage of the annual output.

The orchard area is now hardly equal to the special demands of the evaporators to supply a growing and insistent market.

The evaporated apple industry is one that has grown up without any special advertising or attention until it has come to have an important place in the world's commerce and food supply.

The distribution of evaporated apples to consumers has been rapid and satisfactory this season, and there is fair prospect of the free movement of such remnants of the year's product as remain in the hands of producers.

Remedy for Borers.

Where the trees have a rough bark remove all the projections by scraping with some blunt instrument, says "American Cultivator." Then scrub the trunk and the lower part of the limbs with a mixture made by mixing one quart of soft soap or one pound of hard soap with two gallons of water, and after the mixture has been heated to boiling point add one pint of crude carbolic acid. A small amount of paris green and lime may be added to this, if desired. With the scrubbing brush apply this mixture to the trees late in May or early in June and then twice at intervals of two or three weeks thereafter. The object of these applications is to prevent the laying of eggs and the hatching of grubs.

Methods of the Grape Belt.

For the past few years the roots have been set six and seven feet apart in the row, the object being to put up fewer canes from each vine and still maintain an average. The posts should be between the third and fourth vines to prevent the vines from sagging when loaded.

The best roots obtainable should be purchased. They are now so graded that those designated "extra number one" are the kind to get. Other grades are set, but the best are always the most satisfactory.

These roots are set very deep, from fourteen to eighteen inches below the general surface of the soil. As the ground is worked the high centres are gradually moved toward the roots. Corn or potatoes are usually planted between the grape rows the first year.

The first year's growth is cut back to two or three buds the second spring. No other crop should be attempted grown the second year.

The third spring, the canes are tied up. Not more than two canes should be used. One and a half canes are better; that is, one cane to the top wire and a shorter one to the bottom wire. The shorter cane makes the better wood for the following year. Invariably the best growth is near the top of the cane, and if both canes are tied to the top wire, the growth of wood will be too far from the ground to make a good shaped vine. The first wire is usually twenty-four inches from the ground, the second wire is from twenty-six inches to twenty-eight inches from the lower wire.

The canes are tied with No. 21 wire cut about five inches long, and so twisted around the cane and trellis wire as to come off with the old wood. String is used when necessary to tie any of the canes to the lower wire. Tie a loose knot to prevent girdling.

We tie but once, unless some of the vines should be broken down with wind or other causes. A good tier can tie an acre a day in a vineyard averaging four canes to the vine.

Shakespearean Wisdom.

Be checked for silence, but never taxed for speech.—"All's Well," I, i, 176. Better a witty fool than a foolish wit.—"Twelfth Night," I, i.

Celerity is never more admired than by the negligent.—"Anthony and Cleopatra," III, vii, 29.

Every one can master a grief but he that has it.—"Much Ado," III, ii, 29.

Fast bind, fast find.—"Merchant of Venice," II, v.

Few love to hear the sins they love to act.—"Pericles," I, i, 92.

Forbear to judge, for we are sinners all.—"2 Henry VI," III, iii, 31.

Good reasons must, of force, give place to better.—"Julius Caesar," IV, iii.

He that is giddy thinks the world turns round.—"Taming of the Shrew," V, ii, 20.

A DOCTOR'S EXPERIENCE

Medicine Not Needed in This Case.

It is hard to convince some people that coffee does them an injury! They lay their bad feelings to almost every cause but the true and unsuspected one.

But the doctor knows. His wide experience has proven to him that, to some systems, coffee is an insidious poison that undermines the health.

Ask the doctor if coffee is the cause of constipation, stomach and nervous troubles.

"I have been a coffee drinker all my life. I am now 42 years old and when taken sick two years ago with nervous prostration, the doctor said that my nervous system was broken down and that I would have to give up coffee.

"I got so weak and shaky I could not work, and reading your advertisement of Postum, I asked by grocer if he had any of it. He said, 'Yes,' and that he used it in his family and it was all it claimed to be.

"So I quit coffee and commenced to use Postum steadily and found in about two weeks' time I could sleep soundly at night and get up in the morning feeling fresh. In about two months I began to gain flesh. I weighed only 146 pounds when I commenced on Postum and now I weigh 167 and feel better than I did at 20 years of age.

"I am working every day and sleep well at night. My two children were great coffee drinkers, but they have not drank any since Postum came into the house, and are far more healthy than they were before."

Read "The Road to Wellville," found in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.



Honeymoons in General.

There are all kinds of honeymoons. Some joyful, some pitiful, some brief and a few never ending. There are countries where the bride is sold like cattle. She has no choice in the selection of her husband, and knows little of him previous to her marriage. Such brides have no honeymoon.

In this country, and in most civilized lands, the brides are not openly purchased. They usually have freedom of choice, and yet there are many brides here that have no honeymoon. A young girl who marries for a home, a position, or for wealth is sold in the open market. Many such brides are annually sacrificed even in this christian land. It does not seem possible that christian people could permit such things, but they do; and such affairs are not frowned upon as they should be.

People in mature years look upon the love affairs of young people as fanciful, and of little importance. If the young girl already has a heart attachment, the older people suggest that it be broken off, without a shudder or a thought of the consequences on both parties so deeply interested, and yet how many young lovers have thus gone broken hearted to the grave?

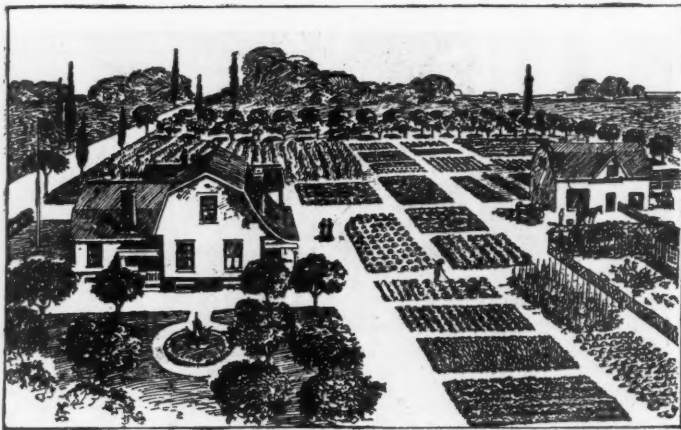
Love affairs are not trivial matters—they are serious, and often affairs of life and death, of discouragement and disaster.

Happy are two young people starting out in life, enjoying each others confidence and affection, possessing only health, energy, ability and ambition, in comparison with those whose hearts are not enlisted in the life co-partnership, and yet have unlimited wealth at their disposal. To the first everything is possible, to the latter nothing good can be prophesied. And yet you must not be unmindful that money is needed. The following from Jenness Miller expresses my thoughts of young love: "I did not dare to speak a word, not even to look at her, but I would have been willing to rush through fire and water to attract once more the anxious, kind look of the beautiful girl. On my way to the school in the evening, I invented wonderful deeds of daring—I would perform, and which would astonish her and excite her admiration. I did not expect nor ask for more. The unconscious dawning of love in the youthful heart belongs with all its characteristics to childhood alone. The young heart is foolishly eager, easily satisfied, and exceedingly selfish and vain. It is not yet capable of loving, but it longs to be loved, to be admired; it does not aim at making others happy; the only happiness it knows is a delightful trouble; the only desire to receive love without giving it. In later years one gives without receiving, and that is not very pleasant either. And thus everything is for the best in this world—where there are people who find pleasure only in giving, and others who are only happy in receiving. But what a blissful brief period is that when one gives and receives, when one loves and is loved again! I have known that time; but she, who made me so unspeakably happy, has now forsaken me. How beautiful was the world when I saw it with her, how blue the sky, how balmy the air! Hand-in-hand we hastened from place to place, and wherever we went Joy smiled to greet us, and Pleasure bade us to stay. We went on, singing, laughing, rejoicing, sure of our happiness everywhere. Sometimes our exuberant joy would astonish more cautious people. But their severe look would soften when their eyes had rested upon us for a moment. 'They are young, let them enjoy themselves,' said the old people, and with a melancholy smile they passed on. She clung so lovingly to my arm, she pressed herself so fondly to my side, that I thought that I could never, never lose her. The idea of a possible change never came to me, never darkened one moment's happiness. Weeks, months, years, passed away—we were not aware of it. One evening when I came to her home I found the room dark, cold and deserted; she, my joy, my love, my light, my all, was gone forever."

Shall we define the honeymoon? It is a season of illusion. The anticipations of the bride and groom are never realized, and yet it seems to them possible that they should be. The husband thinks his young wife perfection in

every respect; to him she is an angel from heaven, lacking only wings to float about in airy nothingness. She is to him the embodiment of integrity, amiability and sublimity, as well as queenly, beautiful and lovely. To the wife, the young husband is a hero, worthy to be placed by the side of Caesar, Hannibal or Napoleon; a man capable of heroic deeds; a man in whose achievements her ambition is to be satisfied. He is one who will step out into the world to conquer with every step.

Heretofore, both have appeared to each other not only in their best dress and best spirits, but every little fault each has attempted to conceal from the other. Therefore, we, who are older, know that there must be an awakening from the sweet dream of perfection. Possibly I might interpret the words honeymoon as a season of great expectations on the part of both the bride and her mate, and the termination of the honeymoon that period when each realizes fully the imperfections of the other.



Who would not like to spend a honeymoon on a small farm like this?

Honeymoons are not limited as to place. They may be spent in a crowded city, upon the ocean, in the mountains, or on the farm.

Never choose the ocean for the spending of your honeymoon. It sounds nicely in poetry and romance, and is a nice thing to dream of, this bounding over the ocean billows with your loved one by your side, the husband viewing without fear the raging storms, while his young wife clings to him tenderly, but affairs do not work so well in actual life. Seasickness intervenes. Nothing will terminate the illusions of the honeymoon more quickly. The husband will learn more of his wife's character after a day of seasickness than during a year of ordinary life. If he has supposed her to be an angel, her wings will rapidly diminish as she yields to the ever-powerful solicitations of Neptune.

If the bride has formerly imagined her husband a valiant hero, how great the fall, my countrymen, when she beholds him in a spasm of seasickness.

The mountains have a great attraction for newly married people. There is always a glamour of romance hanging over them. People seem to be a little nearer heaven on the mountain tops than in the valleys. In the distant views that the mountains tops unfold, young people see the great field of life's work opening before them like a page of poetry. At their feet the great rivers of commerce hasten, also the trains of cars heavy laden with merchandise or human freight. This wedded pair are now to unite their efforts in helping the world in its onward march. Their industries shall help to swell the traffic of rivers and railroads.

Here the beautiful sunrise and sunset tell their own peculiar story to the happy pair. All nature sympathizes with their great joy.

Nor need the city be an uncongenial place for spending the honeymoon. You can be as completely lost in a large city as in the mountains. No one pays much attention to you in the city, especially if it is a strange city. You are simply two of one hundred thousand souls. The art galleries, the concert halls, the suburban resorts,

parks, drives on the fashionable streets—each has its attractions.

Lovers on a Fruit Farm.

What author has chosen the fruit farm as a place for spending the honeymoon? No one that I can recall, and yet few places have such attractions. There is no more poetical place on earth than this. Here we have eternally the songs of birds, the succession of blossoms, the humming of bees, sighing of the wind, the sunrise and sunset, the morning and evening drives, walks through the shady lanes with insects noisy at every step, the voyages of discovery in the undergrowth of the forests, the hunt for the first ripe strawberry, peach, apple or grape.

One Honeymoon in Particular.

"Did you see that sign on the farm house?"

"Why, yes, certainly. What about it?"

"It reads, 'For rent or sale.' I have an idea! Let us rent this place or buy it and make it our home!"

The young people who made these remarks were riding upon a railroad train which was nearing a rural station. Both were young. There was something about this couple which, though modest and retiring, attracted the attention of other travelers upon the train. Some surmised that they were newly wedded. Be that as it may, when the train slowed up, the young couple left their seats and departed.

"Do you suppose we can find our way to the place?" asked Jessie.

"Why, of course we can; and we shall have a delightful ride out there.

to get into the house, which they found locked. Raising a window, Harry crept in and pulled Jessie in after him. Everything was neat and tidy, giving the impression that the house had been occupied by nice people. The walls were neatly papered. There was an old-fashioned fireplace in the sitting room that looked as though it had warmed many happy people; its walls were dark with the smoke of many log fires.

"My idea," said Jessie, "is to occupy this farm. How romantic it will be to leave the city with its noise and dust and smoke, with its dress and rivalries, and settle down in this quiet comfortable spot, where we can make many new friends, grow our own potatoes and peas, and cabbage and berries, apples, peaches, plums and grapes; burn the wood of our own forests; take our own grain to the mill to be ground, and live like a prince and a princess all alone by ourselves!"

"It's a splendid idea," said Harry, "although a little rash, I confess. Surely an hour ago you had no such design as this, nor I. As for myself, I have had no experience in farm life! I hardly could distinguish a cow from a sheep; but you, my dear wife, having been brought up on a farm, could doubtless give me wise counsel in regard to the practical affairs of farming."

"Certainly, I could," replied Jessie. "Had I not been brought up on a farm I should not have advised such a course as this. Now let us find the proprietor and see what kind of a bargain we can make with him."

The owner of the farm was found about a mile distant. He said that this place had been purchased for his son on the event of his marriage; this son was taken suddenly sick and died, and thus the place was vacant. The farm embraced one hundred acres of good tillable land and a small piece of timber in one corner. The annual rent was five hundred dollars.

"But supposing we should want to buy the farm?" said Jessie.

"I should be willing," said the owner, "to lease this farm to you for a series of years, with the privilege of buying it at the end of the lease, should you desire to do so, at one hundred dollars per acre."

The result was that the farmer was to meet them at the village the next day, when the papers were to be signed and everything completed.

The farm had been planted the year before to various kinds of small and large fruits; a plantation of strawberry, raspberry and blackberry and grapes; also an orchard of peach, plum, cherry, pear and quince. These had been well cared for up to a recent date and yet were sadly needing attention.

Our hero and heroine retired to the hotel and made plans for future settlement in the new locality.

The village was such as may be frequently met with in any fertile state, not large, but cozy and comfortable; with churches, shops, mills, and hotels, and a population of about 3000 souls. It was located in a very attractive region, one of the great wheat and corn growing sections of the country. Here was located some of the finest soil in the world for grain or for fruit growing. This the young couple well understood, not only by previous information but from what they could gather by conversing with the people about the village who knew the farm they were talking of buying. This farm had a reputation for productiveness. Many people had thrived on it in years gone by.

While it is a matter of some difficulty for very many people to purchase a farm and furnish the house with the necessary furniture and equipments, and to furnish the farm with necessary tools and machinery, owing to lack of capital, it is easy for those who have money to thus equip themselves. Our young friends had this necessary re-enforcement. The cashier of the little bank in the village soon became acquainted with them; and they had a nice sum on deposit which they could draw upon at a moment's notice.

Thus, at the end of a week, we find Mr. and Mrs. Harry Farnham snugly ensconced in their new home, surrounded by every comfort, and as happy as pigs in clover.

(To be continued in our next issue.)

Let Us Smile.

The thing that goes the farthest toward making life worth while, That costs the least and does the most, Is just a pleasant smile. The smile that bubbles from a heart that loves its fellow-men Will drive away the cloud of gloom and coax the sun again. It's full of worth and goodness, too, with manly kindness blent— It's worth a million dollars, and doesn't cost a cent.

—"National Magazine."

Orchard for Sale.

C. A. Green: I will give you 2 per cent. if you can send me a purchaser for my apple orchard of forty acres. There are 970 apples trees, 60 plum, 60 cherry, 20 pear trees, 19 years old. Nearly one half the apples are Baldwins, one fourth Greenings, balance mixed Kings, Pewaukee, Grimes Golden, Ben Davis, Spy and Yellow Transparent. Plums mostly Burbank, balance Abundant. The apple trees mostly thirty-three feet each way. Some of them are thirty-six each way. The orchard has been in sod for some years so can't report any large yield, but I have broken up one-half and will give that thorough cultivation this year and the balance will cultivate next year. The prospects are excellent for a good crop this year. I have employed one of the best and most experienced men to help in pruning and spraying this year and I would be very pleased to have you see my orchard so you could recommend it. I would pay your railroad fare and meet you in St. Thomas and drive you out to the orchard, seven miles from St. Thomas, if you would write me four or five days and let me know what train you would come on. There is fifty-four acres all told of rich clay loam in this place. Well tile drained, good air drainage, gently rolling. The trees are healthy and vigorous. Located six miles from Lake Erie, a little over one hundred feet above the lake. The buildings are a one story cottage, 28 x 40, with good cellar. Barn 46 x 54 feet, both in fair repair. Quite a lot of evergreen trees around house. Fences good. Good and lots of water. Two and one-half miles to New Sarum village with station on G. T. R., store, postoffice, blacksmith and church, school one mile. Price \$25,000, \$10,000 cash, balance \$1000 per annum at 5 per cent. After reading, "How I Made the Farm Pay," by fruit growing and Green's Fruit Grower (which I like very much) I thought you would be a good man to write to. Or I will give you \$50 to get me a loan of \$6000 at 5 per cent. for five years. There is \$3000 mortgage on the place now, but if I could get \$3000 more I would just as soon keep the orchard. The loan companies here seem to value the land higher without the fruit trees on it. I might say that the man that is helping me in my orchard this year grew and packed 5960 barrels of apples last year which he sold for cash at his nearest station for \$2.75 a barrel and has had fifteen years' experience in apple growing and he told me that this was the best orchard for its age that he knew of. This is in Elgin county.—Isaac W. Pearce, Ontario, Canada.

C. A. Green's reply: I sometimes get letters like this and in reply usually write that I am a very busy man and have no time to make sales of fruit farms. But I receive many letters from investors who desire to buy orchards. I think it would pay you well to advertise in Green's Fruit Grower. There should be no difficulty in your getting an additional loan of \$3000 on your orchard which it seems would be ample security. If there is good fishing in your locality I might accept an invitation to come over and see your orchard and have a day's fishing. Give me particulars about the fishing. Your locality would seem to be a very desirable one for orcharding. You seem to lack capital. If you have a business ability you should have no difficulty in raising the money you need and in making your orchard a gold mine.

Mark Twain Pays \$4 per Barrel for Cigars.

His father died when he was 11 years old, and ever since then he had smoked publicly. "As an example to others, and not that I care for moderation myself," he added, "it has always been my rule never to smoke when asleep and never to refrain when awake. It's a good rule. I mean for me; but some of you know quite well that it wouldn't answer for everybody that's trying to be seventy. I smoke in bed until I have to go to sleep; I wake up in the night, sometimes once, sometimes twice, sometimes three times, and I never waste any of these opportunities to smoke. The habit is old and dear and precious to me. To-day is all of sixty years since I began to smoke the limit. I have never bought cigars with life belts around them. I early found those were too expensive for me. I have always bought cheap cigars—reasonably cheap, at any rate. Sixty years ago they cost me \$4 a barrel, but my taste has improved latterly, and I pay seven now. But that includes the barrel. I often have smoking parties at my house; but the people that come have always just taken the pledge."

A fool laughs at what is good, at what is bad and at what he does not understand.

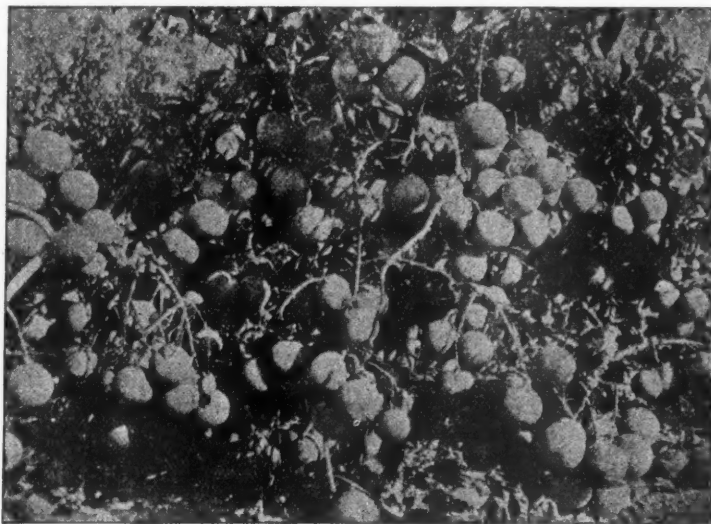
FLORIDA'S GRAPE FRUIT GROVES.

The Spaniards brought the grape fruit to Florida, and left it behind them when we chased them off the mainland. Here it has been ever since, until the last ten or fifteen years, neglected and despised, but taking care of itself with cheerful virility, says the Boston "Transcript." It grew wild or people planted a few trees about the house for its rapid growth of grateful shade and the picturesque decoration which its huge globes of yellow fruit furnished. These few people considered edible. Now we know better and the north calls for grape fruit with a demand that this year is only partly satisfied with 4,000,000 of boxes. Floridians eat the once despised fruit with avidity now, and a thrifty grape fruit grove is already recognized as a profitable investment. I say a thrifty grove, for all groves are not thrifty. The tree is lavish to its friends, and in congenial surroundings will produce fruit almost beyond belief. I have seen a single limb not larger than my wrist weighed to the ground with ninety-five great yellow globes by actual count. I have seen a whole orchard that had been tended for years with assiduous care calmly dying down from the top and sinking back into the earth whence it sprang. More than anything else the grape fruit must have the right subsoil under it. If well-drained and where the soil underneath their taproots is a good clay, overlaid of course with the all-pervading Florida sand, they will love you for it. Care and fer-

self, with a lash twice its length, long enough to reach the leading off ox from a position on the high side of the cart. On the end of this lash is a snapper which gives off a noise like that of a pistol. Hence the Florida woodsman is called a "cracker," a name which has come to be applied indiscriminately to all natives, whether drivers of oxen or not. Thus do we carelessly corrupt language. The cracker is the man who cracks the whip. Wherever the woodsman drives oxen you will hear it.

How does this close-fibered, tough-wooded tree find in sun and soil the material to produce such fruit? Here is a tree ten years old that holds by actual measurement twenty boxes, almost a ton, of fruit on a tree that is about fifteen feet high and six inches in diameter at the butt. It is as if a humbling pear tree in a northern garden should suddenly take to producing pumpkins and bring forth 1200 of them.

Here on the Indian river, where no cold weather of sufficient severity to hurt the fruit has yet penetrated, it is the custom to let it hang until mid-March, when the blossoms appear with it, making a grove a place of singular beauty. Out of the dense, deep green foliage spring a hundred yellow glows, while all the outside of the tree is stippled with a frippery of white, a dense green heaven set with golden suns in crowded constellations and all one milky way of starry bloom. The scent of these blossoms, which is the scent of



GRAPE FRUIT (POMELOS) AS THEY GROW.
Illustration by courtesy "Southern Orchards and Homes."

tillizer will do the rest, though even then it must be the right kind of care and of fertilizer. If you plant your trees where there is a "hardpan bottom" neither love nor money nor religion will bring them to good bearing. Why "hardpan" which seems to be a dense stratum of black subphurett of iron should be under the surface of one man's ten-acre lot, while under that of his next-door neighbor lies the beloved red clay, it is difficult to explain. Florida reminds me always of Cape Cod. It seems to be built out of the chips and dust of the making of the near by continent, dumped irrelevantly. There is no telling why one acre is a desert that one would plow as uselessly as Ulysses plowed the seashore, and the next acre is fat with fertility, but it is so.

Hence, people plant grape fruit groves, not where they will, but where they may, and you will discover them in the most delightful out-of-the-way places. Paddling up river one day, ten miles from any habitation, along a stretch of profuse tropical forest, I heard the cluck of axle-boxes and a voice said: "Whoa!" Landing, I found that the wilderness was but a sham, a thin curtain of verdure, and behind it was a stretch of fertile land covered by grapefruit trees in orderly procession, twenty-four feet apart each way, 1200 of them. This man must cart his fruit through ten miles of sandy barrens to the train. He might have set his trees along the railroad so far as cost of land was concerned, but they would not have grown there. Once a week there comes into Fort Pierce a team of six runt oxen, bred of Florida range cattle stock, drawing a creaking wain laden down with orange and grapefruit boxes. Thirty miles across the barrens these have come, from groves out at Fort Drum, and they will take a load of groceries and provisions back. It takes six days to make the round trip, and you may hear the team long before you see it. The man who drives these oxen carries a whipstock as tall as him-

orange blossoms, overpowers all other odors and carries miles on the brisk March winds. It reminds one of northern suburbs in June when the syringas are in bloom. To me it is not so delectable a scene as the syringa, having a roughness in its full force which is disagreeable. On a still day to stand in the center of a grapefruit grove in full blossom is to be overpowered with it.

How Could We Do It.

A beef bone will yield soup seven different times.

No man ever has a knife in his pocket when asked for it, and yet we spend \$40,000,000 a year for cutlery.

Americans tip waiters and servants to the tune of \$5,000,000 a year. All this could go towards raising turnips.

A tick stuffed with straw makes a bed that kings have slept on.

If all the potato peelings now thrown away were made into raspberry jam we could do away with a thousand poor-houses.

By sitting with bedquits around us we could reduce the fuel bill one-half. Folks got along without forks up to the year 1665 and were happy.

Two raw turnips will fill a man up just as much as a \$10 dinner at Delmonico's.

Heels are a superfluity on boots and shoes, and yet they cost us \$30,000,000 a year.

An old coat for a pillow would save us \$6,000,000 a year in geese feathers.

A man looks at his watch but once in the twenty-four hours, and yet the annual sales are \$230,000,000 per annum.

Value of Cow Manure.—A New York expert estimates the value of manure produced by a cow at \$8 per annum. This estimate is very much below the mark. The liquid alone contains \$13 worth of nitrogen, while the solids are certainly worth \$5 more. Providing all the manure is saved, solids and liquids.

A Big Boost in Farming.

Written for Green's Fruit Grower.

The time has come when this great country of ours is falling behind as a producing country. Our farms are not yielding half the amount of grain and other products per acre that are produced on many of the farms of Europe. The population of our country has increased so that we produce here but little more than our population consumes. It is possible for the farmers of this country to double the amount of production. This means that the average farm in this country may be made to produce twice as much corn, wheat, oats, rye, barley, apples, peaches, pears, plums, quinces and grapes as they do at present. The question is how can we get the owners of our farms to make their land more productive? Our state and the U. S. government are doing much to encourage farmers to increase the fertility of soil, but both state and government might do very much more. The Pennsylvania and the New York Central railroads have wisely purchased farms for the purpose of teaching farmers how to make the land more fertile and how to raise larger crops. Many of our farmers know how to do these things, but they do not act from the knowledge they possess. These farmers know that they cannot continually draw money from a bank without making deposits. They know also that they cannot continually draw from the fertility of the soil by heavy cropping without making deposits of fertility in the soil, but they do not act as though they had this knowledge. Our farmers continue to deplete the soil of fertility whereas good farming requires that the soil should be made richer every year. It is indeed poor farming where the soil is growing poorer each year as it is on the average farm over this, the Empire state. Do not infer from what I have said, that our farms are impoverished for they are not. They are capable of being made more productive than ever by a wise course of treatment. The larger part of our soil needs humus which can be secured by plowing under clover or clover sod, rye, buckwheat, cow peas or barnyard manure. Stable manure is the main source of supply of fertility of the soil, but the soil may also be largely reinforced by commercial fertilizers containing nitrogen, potash and phosphoric acid. There are other forms of fertility which are conserved and applied to the soil of China and India which in this country and many other countries is thrown into the sewers, and from there into the brooks, rivers, lakes and harbors. When the people of this age come to a complete understanding of how to save every kind of soil fertility, and apply it judiciously to the soil, and when the farms will be divided into smaller tracts, and more carefully cultivated and drained, it will be discovered that twice the present yield per acre may be secured of all our farm crops including fruits.

The Fatal Diamond.

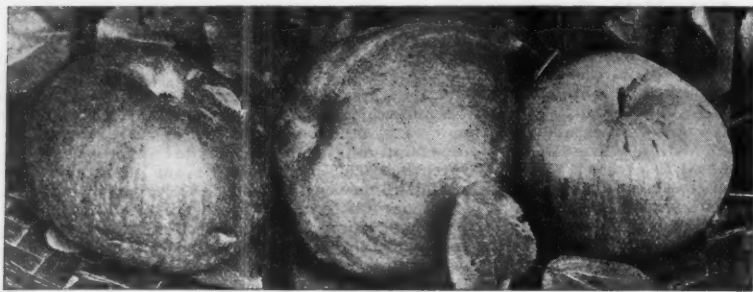
Written for Green's Fruit Grower.

A marvelous diamond valued at nearly a million was stolen from an idol in India and presented to a king. The king soon after was assassinated. The diamond was later presented to another monarch and this monarch also was killed soon after. The diamond changed hands often. Whoever received it came to a tragic end. Finally it was presented to a noted actress. Soon after the actress was divorced and lost her fortune. No one knows who owns this fatal diamond at the present hour. It is doubtful whether it would be accepted as a gift by many people who were aware of its past history.

This indicates how superstitious are men and women. Even those of us who claim that we are not at all superstitious, and do not yield to superstitious feelings, even we are superstitious.

Superstition is something born into us from the dark ignorant ages, when man was compelled to guess at the causes of things. When the wild man saw the lightning and heard the thunder he could not account for it, therefore he gave this and other natural phenomena superstitious associations. When the mountains belched forth in flames the wild ignorant man said it was an angered god visiting man with fire and smoke. Surely any sensible person must know that no diamond or other stone or gem can have the power to produce misfortune, that Friday is no worse or better than any other day for starting enterprises and that all of these fanciful and erroneous ideas which we call superstition are something that we should banish from our minds if we would be happy and healthy.

Prosperity follows the plow and generally a new mortgage follows prosperity.



If I knew I were to die to-morrow, nevertheless, I would plant a tree to-day.—Stephen Gerard.

Fruit Associations.

Written for Green's Fruit Grower by
A. G. Symonds.

Without doubt New England embraces some of the best land for apple culture in America. Some of the best apples produced in this country are grown on her rock ribbed hills and they are known by their superior quality in the great markets of the world. In spite of all this the New England orchardists are not keeping step with the progressive fruit growers of the northwest.

In Oregon and Washington the orchardist is constantly on the alert to detect the slightest ailment and quick with remedies to eradicate the disease. There is no detail so minute but what demands his attention. The color of the foliage, the condition of the bark, coloring of the fruit as it ripens are all matters of daily observation and study.

Before setting out an orchard the northwestern considers the location with reference to drainage, air currents, elevation, and exposure. The soil is analyzed to determine the fruit best adapted. He furnishes the necessary fertilizer and sprays frequently to eradicate the various pests and diseases that infect the fruit. His reward for his efforts is a perfect apple that finds a ready market at top prices all over the world.

The reason for all this may be rightfully attributed to organizations formed among the fruit growers of the northwest, mainly for the purpose of marketing their product. The effect of such organizations upon the fruit growers has been a marvelous one. Interest and enthusiasm have been stimulated to a high degree and every apple grower rivals his neighbor in endeavoring to raise the best product.

Every important fruit growing section of the west has its associations with its officers selected by the farmers and such officers are chosen from their experience in raising and shipping apples. They receive good salaries and are vested with important duties and large powers. They make rules and regulations governing production, picking, and packing. The standards of size and color are fixed by them and they accompany the shipments to the markets and arrange for their disposal.

In these essentials that have proved such a boon to northwestern apple growers, New England fruit growers are singularly lacking. From the first settlement apple culture has been a side issue with easterners. Very little study has ever been given to location, drainage, soil, or varieties of fruit. Spraying, regarded until recently as a fad, has never been extensively practiced. No steps have ever been taken to organize the fruit growers, so each individual found a market for his own fruit.

As a result of this hap-hazard way of doing things a large part of the apple crop of the east is worthless. The remainder of the crop when it reaches a market, whether local or foreign, does not bring the prices it ought to command. Carelessness in packing and shipping are largely responsible for this state of affairs.

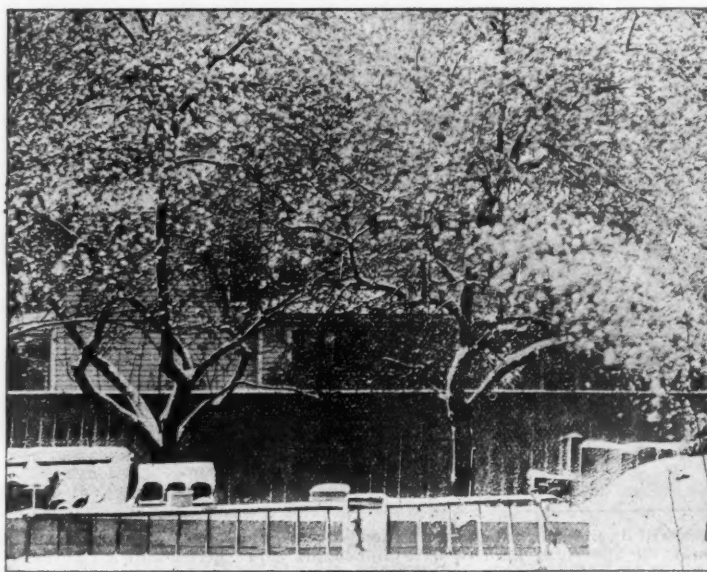
If New England apples are to compete with the apples of the rest of the country, orchardists must advance. Fruit culture must be put upon a higher plane than it has ever before reached. Western ideas, which are modern and progressive, must be adopted. Apple culture must no longer be a side issue with the farmer, but become the paramount issue demanding his most careful thought and consideration.

Let the New Englander learn that the chief essentials are: careful selection of location, and variety, eternal warfare against pests, clean cultivation and proper fertilization, intelligent trimming, pruning and thinning of fruit, co-operation with neighbors to procure quantity shipments and low rates, and to attract responsible dealers, the establishment of fixed standards of size and quality, and making the label of the association a guarantee, backed by

the honor and good faith of all the growers.

When this is done New England apples will command the highest prices in the markets of the world and apple culture will become the leading, as well as the most profitable, industry upon the New England farms.

Hasten the day when this shall become a reality. Hasten the day when New England will become one vast apple orchard that will blossom as the rose. Hasten the day when human intelligence and skill among the rural classes will be bent toward the goal that promises rich reward for their labors. Hasten the day when prosperity shall bless the hillsides of New England, when they are covered with ruby colored fruit. Hasten the day when the spirit of universal brotherhood shall so unite the fruit growers as to form associations that must prove so beneficial to them. Hasten the day when New England leads the world in apple culture.



The result of late spring freezing in Illinois is shown on the fruit trees in the above photograph. These trees were in full blossom with the snow clinging to the blossoms and frozen on them, and yet there is a promise of a light crop of apples. We are thankful that the above disastrous condition of things prevailed only in a limited portion of this great country. Photograph by M. Sirgrasser, Ill.

Scientific Fruit Growing.

By David Snell.

I had an early lasting impression that fruit was a good thing, for my wedding suit was purchased from apples from a little neighboring orchard I was caring for.

I commenced by thorough tillage in orchard and all grains. Much depends upon it, though I will drop it for the more important subject pertaining to our next year's crop, that of thorough spraying.

Three years ago when I took charge of the A. J. Smith orchard of thirty acres of apples here in western New York, I thought it my duty to inform myself in regard to the better care of fruit.

It will perhaps be a benefit to all if I mention some things I learned. The first and of great importance is: The more these men know the less they know. That is the more they know the more they are ready and willing to learn. Some people are afraid of the word science. If its definition is knowledge, knowledge applied, it is nothing to be afraid of. If a man is tilling his ground well before planting or cultivating his crops to conserve moisture he is doing scientific work. If we apply our spray carelessly, thinking we know as much or more than the other fellow, that is the joke of it. If we are looking for wisdom and applying it that is science.

The last two years we have sprayed with lime and sulphur before buds open, so have omitted the first spraying with bordeaux and sprayed after blossom time with bordeaux. We have used paris green but this year have used arsenate of lead with no injury to fruit

nor foliage. We aim to grow fruit as near perfect as we can from the tree and came very near it last year as far as the codling moth is concerned. We never spray for him but once, doing very thorough work. Where we sprayed the first four days after the blossoms fell.

The drops under the trees up to picking time measured four quarts. The fifth day's spraying they measured one peck. The sixth day they measured one half bushel, and so on to two bushels and more, worms in apples to correspond.

Scientific Caring of Fruit.

Dr. Surface, the State Zoologist of Penn., says that plant pests are annually ruining property valued at \$10,000,000 in Pennsylvania. That is good and sufficient reason why the state department of agriculture should send a special train over the state and try to save the orchards, by means of lectures by men who know whereof they speak and can give valuable information and advice for fighting the pests.

"Plant pests are chiefly of three great groups, each of which demands its own kinds of remedies and its own time of application. These are the plant diseases, such as the rusts, smuts, blights, mildews, leafspots, cankers and leaf-curl. Most of these are preventable rather than curable, and the successful art of the husbandman lies in applying the proper preventive material called a fungicide, because used to prevent fungi before the tissues of the leaf, fruit or other part commences to show injury by the disease. The standard fungicide and the one still generally acknowledged as the best is the bordeaux mixture, made by mixing three pounds

view to discovering a satisfactory remedy for this trouble. Spraying with diluted bordeaux mixture has been most commonly recommended, but its injury to the foliage has made it unsatisfactory, since the remedy must be applied during the growing season.

The peach scab (often called "black spot") is another disease which seriously affects the peach crop in all sections east of the Rocky mountains, although not causing such serious losses as brown rot.

As the result of experimental work by the United States department of agriculture, a cheap and simple remedy for this disease has been found in the self-boiled lime-sulphur wash. This can be applied during the growing season with very little danger of injuring the fruit or foliage, and it is very effective. Furthermore, by mixing arsenate of lead with the fungicide, the curculio can be destroyed at the same time.

The department has just issued a bulletin describing the preparation and use of the remedy. This publication will be of great interest to peach growers in all sections.

Wealth from Apple Orchards by Improved Cultivation.

An old friend in Aroostook county, Maine, has just harvested 6000 barrels of potatoes from fifty acres which sold for a dollar and a half per barrel, and were grown at a total cost of sixty dollars per acre, because of a high state of cultivation and abundance of nitrogen in the soil from clover roots.

A neighbor in Monmouth, in central Maine, has finished harvesting 2100 bushels from seven acres on old land. These were grown at a total cost of eighty dollars per acre, which is the usual allowance in this section.

A Vermont farmer has just sold his one-hundred-acre orchard for \$50,000, and the crop since harvested is valued at \$17,000.

A neighbor in Monmouth refused \$1900 for a three-acre orchard set thirteen years ago. Another would not sell a six-acre orchard set in 1891 for \$7000, because it is paying better than bank dividends on that amount. Another of four acres could not be bought for \$5000 for the same reason. There is an orchard set by an old physician on land for which he paid \$3 per acre, which was sold a few years ago for \$3000 and could not be bought to-day for twice that.

A lot of trees, condemned to be cut down in 1907, were purchased by me, pruned and cleaned up, May, 1908, and fertilized the past season with ten pounds per tree of Fisher formula fertilizer. The great growth of wood, size, strength and vigor of leaves and abundance of fruit buds to-day, tell the story of radical regeneration. I could not afford to sell these trees for \$50 each.—"National Magazine."

Anjou and Lawrence Pears.

A veteran fruit grower in "Practical Farmer" recommends these two "excellent winter pears" to those who may be considering the planting of pear trees. He says there are really no better ones than these, as the frequency of their appearing in our market suggests. The Lawrence is rather long in shape, of brownish yellow color when ripe, and as sweet tasting as sweet can be. Anjou is larger and not as long in shape, or perhaps better described as being wider in proportion to its length than Lawrence; and it is of a deep green color even when ripe. Its flavor is sweet and sprightly, yet not so sweet as the Lawrence. As they ripen here, the Anjou is the first to be gathered, reaching perfection early in October, while the Lawrence hangs on the tree until early in November; in fact, the writer does not gather his until freezing weather threatens. When to be kept in cold storage it is better to gather them before fully ripe, they keep better in the storehouse then, the temperature being but a degree or two above freezing. Young two or three-year-old trees are better to plant than larger ones. They recover from the planting quicker, and rarely fail to overtake them in growth in two or three years.

Tree Treatment.

When a tooth begins to decay it is time that a dentist should be consulted. Better still it is a wise precaution not to wait for the decay to begin before the dental doctor is visited. And so it is with tree culture.

Do not wait until the tree begins to rot before giving it attention, it may be too late then. So, with insect pests, eternal vigilance should be exercised to guard against the San Jose scale, the codling moth, and other enemies of fruit raising.

Some greyhounds are so wise in new tricks that many are of no earthly use in chasing jackrabbits.

of bluestone, or copper sulphate; and four pounds of quicklime in fifty gallons of water. This will not kill insects, but will drive away a few kinds. It is properly used only to prevent plant diseases.

"The second great group of plant pests is that known as the chewing insects, such as worms or caterpillars of all kinds, potato beetles, wrongly called bugs, the codling moth and all others that eat the tissue of the plant. These can be destroyed only by the application of poisons chief of which are arsenate of lead, two pounds in fifty gallons of liquid, either water or bordeaux mixture, and paris green, one-half pound in fifty gallons. The former is preferred, as it stays on the plants and is effective so much longer.

"The third great group of plant pests is that comprising the sucking insects, such as all scale insects and plant lice. These are not killed by poisons, but by contact insecticides, such as the lime-sulphur solution applied when the trees are dormant, or kerosene emulsion, or one pound of whale oil soap in five gallons of water applied when the plants are in leaf. This is the essential outline of the chief features of pest suppression."

Saving the Peach Crop.

For years the peach brown rot has been recognized as a most destructive disease of stone fruits. This is a fungous disease, and it is widespread, and very destructive to the peach crop. The loss which it inflicts on peach growers will easily average \$5,000,000 yearly. The loss to the peach crop of Georgia alone is estimated at \$1,000,000 a year. Much work has been done with a

The Neglected Home Orchard.

"How shall I bring my run down, neglected orchard back to a state of profitable production?" is a question which if it were dealt with fully would probably need as many answers as there are neglected orchards in the state, says C. G. Woodbury. The very first thing to determine is the reason for the existing unprofitable condition. The reason is neglect, of course, but neglected may lead to a great variety of troubles, and we must try to find out just what the troubles in an individual case happen to be before we can remedy them.

It may be that the land is low and poorly drained and that the trees suffer from spring frosts and "wet feet." If so, that piece of ground was never meant for an apple orchard and the best thing to do is to cut the trees at once and get some good fire-wood at least, and then set out some young trees in a more favorable location.

The trees may have ceased to bear fruit because the land, possibly never any too good, has been called upon to furnish continuous crops of hay or grain as well as to support the apple trees. It has been shown by pretty conclusive experiments that apple trees set at the rate of thirty-five to the acre (which would equal being set thirty-five feet apart each way) yielding fifteen bushels of apples per tree, draw from the soil in twenty crops more than "twice as much nitrogen, half as much again of phosphoric and nearly three times as much potash" as twenty crops of wheat would remove counting grain and straw with an annual average yield of fifteen bushels per acre. Where the trees are compelled to compete with other crops for a supply of food and water, it is no wonder that they sometimes succumb, considering the heavy demand they themselves must make in order to make good yields.

Not infrequently the neglected orchard is unprofitable because the trees are so crowded together that there is a struggle for bare distance between one tree and its neighbor. The results of this crowded condition may be seen in the long leggy tops, climbing skyward like forest trees, in the struggle for light and air. The writer is of the opinion from observations during the last three years, that in fully one-half the orchards in Indiana, the trees are too close together. Such an orchard, with the tops out of reach, and the ends of the branches interlocking, is impossible to care for properly and can never be made to yield satisfactorily while in such condition.

Beside the conditions spoken of above, there is another whole class of troubles brought about by the omission of those operations of what may be termed orchard hygiene, which are performed by the commercial grower as a matter of course. The trees may be half choked in a thick tough old sod; this sod is liable to harbor mice and rabbits and the trees may be suffering from their attacks as well as from borers, which thrive and multiply under the conditions furnished by heavy sod close up to the tree trunks. Spraying has very likely not been known to the orchard, and what fruit there is, is scabby, deformed and wormy. The San Jose scale, which is one of the worst enemies of Indiana orchards, and which is blotting out the neglected ones every year, may be present doing its deadly work. Pruning has probably been overlooked, or if it has been done at all, it has been done with an axe in a sort of kill or cure way, which left the trees in worse condition than before.

Much is being accomplished nowadays with these old neglected orchards by renovation. By renovation is meant plowing, pruning, fertilizing, spraying, digging out the borers, and in short giving the orchard a thorough house-cleaning.

After the brush is cleared away (and it is surprising to see how large a quantity of prunings a few neglected trees will yield), the orchard should be plowed and harrowed and the surface made fine. Any one who has broken a twenty-year old blue grass sod in an orchard will appreciate why the trees suffer from it. A few surface roots may be cut by this plowing. Never mind that but go ahead. Get the ground fine and keep it cultivated till mid-summer, then sow a cover crop which will protect the ground till it is turned under the following spring.

Along with the cultivation should go a liberal amount of fertilizer. In the use of fertilizer in orchards, you must avoid too much nitrogen. For this reason heavy mulching with barnyard manure is to be recommended only for such orchards as indicate by their small annual growth, and by their scanty and light colored foliage that nitrogen is lacking. For soils of fair natural fertility and where a nitrogen gathering

cover crop, such as clover, crimson clover, cow peas or vetch may be grown, the following formula is suggested:

A thousand to 1500 pounds per acre of a mixture containing one part (100 pounds) each of ground bone, acid phosphate, and muriate of potash. On soils that are somewhat exhausted, 125 pounds nitrate of soda may be used in addition.

In order to get the greatest returns from this fertilizer, it should be thoroughly worked into the soil. This can be accomplished very well, by applying it to the surface just before plowing. The plowing and working of the ground will get the fertilizer pretty thoroughly incorporated and the trees will soon show the beneficial effect of its presence.

After the neglected orchard has been thus treated, an intelligent application of the spray pump will generally complete its cure.

Young Apple Trees Preferred.

Western fruit growers have for some years past been using one-year-old apple trees for planting, in preference to the two-year-old that are used by the eastern growers. The reason for preferring the one-year-old trees is that the head can be shaped at the exact height the grower wants it, and the limbs can be arranged in a more desirable manner. In stock that is headed in the nursery it often happens that the head is too high, and the limbs forming the head are so close together that they make a weak union and are more or less liable to split when loaded with fruit.

Cost of Harvesting Apples.—Estimates vary greatly regarding the cost of marketing apples. W. H. Robson, of Orleans county, N. Y., makes the total 56 cents, which includes 31 cents for the barrel, 12½ cents for picking, 10 cents for packing and 2½ cents for hauling

to the station. Freight and commission would average as much more except in localities near to market. Mr. Robson writes that some of his neighbors sold their apples for \$3 delivered at the station, and one of the neighbors had a crop which sold for more than \$12,000.

Commercial Orchardling.

Shrewd, far-seeing business men are going into farming on a commercial scale in New York state, and with their business training and ability to plan and manage the work of farm laborers, are highly successful.

Conductor F. M. Shepp, of the New York Central railway, has a large fruit farm near Syracuse. A few days ago, while riding on Mr. Shepp's train, we had an opportunity to learn something of his methods. He sets out a thousand young fruit trees each year. His apple orchards consist of Baldwins, Greenings and Spies. Four hundred plum trees are of the Reine Claude variety, and he will set out 150 Missouri plums in the fall. His cherries are of the Large Montmorency variety.

Mr. Shepp mulches his trees with manure, straw, etc., to protect them from freezing. If he lacks a sufficient quantity of manure for this purpose, he hauls it from town, as he has found that this method pays him well.

Four men are given employment the year around in caring for the farm and orchard. By furnishing steady employment, he has solved the farm help problem, having been able to secure and keep men who take interest in their work.

San Jose Scale.

This pest can be controlled best by thorough applications of a lime-sulphur wash prior to the buds opening, or at latest before the young apple leaves are half an inch long.

A well tested home boiled wash may

be made by putting a few pails of water in a large, iron kettle, over a fire; bring it nearly to a boil, then add thereto twenty pounds of lime, followed at once by fifteen pounds of sulphur; stir thoroughly and repeat occasionally to prevent the material from caking on the bottom. Some prefer to moisten the sulphur before adding it to the lime. After thirty to sixty minutes of active boiling, a deep brick-red color should be obtained in the clear solution. Stir thoroughly and strain the wash through coarse burlap or a fine wire netting. This wash can be boiled equally well with steam provided the latter is piped down close to the bottom, so as to keep the sediment well stirred. The washes boiled with caustic potash (lye) or sal soda, instead of fire or steam, are good if they are carefully prepared.

How an Oak Killed Itself.—Dean George B. Frankforter, head of the department of chemistry at the state university, is making a report on the peculiar case of the oak that committed suicide on the university campus by drawing so much copper through its roots into its tissues that it died of suffocation. When the oak was cut down fine particles and thin layers of copper were found in all its fibres. The copper was tested and found to be 99.9 per cent. pure. It is said to be the most peculiar case on record.

Cold That Kills Fruit.—According to an experiment by the Colorado station, apple blossoms when the buds show pink will stand 20 degrees above zero, and when in full blossom will endure 26 degrees. Pears endure about the same cold as apples and peaches in full blossom, are not injured below 28 degrees. Some growers of the state criticize the station findings and claim that under some conditions apples were liable to be blighted at temperatures not below 29 degrees.

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Contents of Book.
1. Insecticides: Here we find every kind of a remedy to fight all plant diseases. 2. Injurious Insects: How to detect them with remedies and preventives. 3. Fungicides for Plant Diseases: This is the chapter for the gardener, orchardist and amateur doctor of all the troubles in fighting all plant enemies. 4. Injuries from Mice, Rabbits, Squirrels and Birds: With preventives and remedies. 5. Lawns, Weeds, and Moss: How to make lawns, control weeds, etc. 6. Waxes and Grafting and for wounds. 7. Cements, Mortars, Paints and Glues. 8. Seed Tables. 9. Planting Tables. 10. Maturities, Yields and Multiplications. 11. Computation Tables. 12. Greenhouse and Window-Garden Work and Estimates. 13. Methods of Keeping and Storing Fruits and Vegetables, Market Dates. 14. Collecting and Preserving Specimens for Cabinet or Exhibitions, Labels, etc. 15. Rules. 16. Postal and Import Regulations. 17. The Weather. 18. Literature. 19. Names, Histories and Classification. 20. Elements, Symbols and Analysis, etc. Prof. Bailey is too well known to say a word about the merits of this book. It will be sent postpaid for two 3-year subscriptions to Green's Fruit Grower at \$1.00, or we will renew your subscription one year and send you a copy of the book, postpaid, for \$1.00. Green's Fruit Grower Co., Rochester, N. Y.

Giant Radish From Japan "SA-KURA-JIMA"

has been grown by our readers to a weight of 42 pounds and to a size of 10 x 18 inches. This wonderful radish was introduced from Japan several years ago by the U. S. Department of Agriculture and was successfully grown last year by Fruit-Grower readers. We have secured the entire supply of seeds and offer it for testing.

10c—Trial Packet Seeds—10c

This is a late radish and may be planted August 1st. It should not be planted earlier than July 1st. Send 10c, coin or stamps, at once before seed supply is exhausted and we will send you free, a copy of The Fruit-Grower, the best garden and fruit magazine published. We will offer cash prizes for the largest radishes grown from this seed. Write at once.

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27 Union Stock Yards, Chicago



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Please mention Green's Fruit Grower.

Aunt Hannah's Replies

Dear Aunt Hannah: I have a boy friend who is very dear to me and we have been going together for some time. One night I got offended at him because he rode on a merry-go-round with another girl. We are not engaged so I cannot expect him not to go with other girls but I know he would be very angry if I had anything to do with another fellow. We had quite a dispute because he thinks it is all right for a boy to go with more than one girl, but not for a girl to go with more than one fellow, and I did not agree with him because I think one is just as bad as the other. Will you please tell me what you think about it? If you think that it is all right for a boy to go with some other girl and not all right for a girl to go with another boy, please tell me why.—"Salomie," Oregon.

Aunt Hannah's reply: As you are not engaged you have no authority to object to the young man's paying attention to other girls. I advise you not to be exacting. It is not well to be too exacting in any of our relations with our fellows. It is a course of wisdom to be liberal minded and not expect other people to be precisely what we desire. Much of the trouble of this world is caused by expecting too much of others. Let us be willing to give more than we receive. If you object to the young man's going with other girls he will have all the greater desire to go with them. If he sees that you do not object he will be less inclined to pay attention to other girls. Boys are full of queer freaks and I can say the same of girls. I am often reminded of the saying of Widow Bedott, "We are all poor critters," meaning we all need a mantle of charity thrown over us in our actions. It would not be wrong for you to allow yourself the same freedom with other young men that your gentleman friend exercises toward other girls.

Dear Aunt Hannah: When I was in my teens I saw a young girl about two years younger than I was. I did not know who she was but was very favorably impressed. A year or two later I met this young lady and after knowing her some time (until she was twenty) I told her of my hopes and how I loved her, and she said there was no chance for me, but I might go to see her as a friend. Three years have nearly gone and I go to see her occasionally. She treats me nice. Would you advise me to propose or wait in silence, trying to please her? She is a long ways my choice of my lady friends. I don't believe I'll ever love any one better than I do her.—A Farmer Boy.

Aunt Hannah's reply: Your lady friend has put you on your guard by telling you that you have no chance. I should come to an understanding with her without delay. Ask her plainly what she means by you not having any chance, learning whether she is engaged to another person. It is not wise for you to form an attachment under such discouraging circumstances.

"Running Water in the Home."

Written for Green's Fruit Grower.

In these days of prosperity of the farmer he should be able to be master of his necessities and we as a farming class are being more and more aware of the fact that running water is a necessity both in the home, stock, poultry, truck farm, nursery or florist.

Therefore the residents of the country should no longer be without the comforts or conveniences of city life.

The matter of comfort is more an more of prime importance and with the increasing use of the telephone, rural mail delivery, artificial illuminating gas, modern heating plants and the automobile, the rural householder is rivaling his city cousin, for the convenience of the city without the discomforts of city life.

The family of a farmer may almost revel in sweet contentment when their home, barn, henry and garden are supplied with running water.

The first and most important item is the protection against fire. How helpless is a country residence without it. Without the aid of the fire department and perhaps the wind blowing at the rate of 60 miles an hour.

The writer witnessed just this winter the loss of our district school house worth \$2500, contents and all, just on account of no way of putting out the fire. It was discovered when it had but a small start, but on account of such a strong wind and no water conveniences, the township had to suffer the loss, besides the teacher lost his job and the pupils were thrown out of

school until another house can be built. But with a home supplied with running water the family not only remains in perfect satisfaction as to fire, but other conveniences are supplied, such as a ready bath at any time, and who needs a ready bath more than the farmer and his family? Think of a sultry June or July day in haying or harvest, or even threshing time, how on returning to the home each tired, sweaty inmate would enjoy a sweet clean bath and lie down to pleasant dreams.

Then the rural district needs running water for laundrying purposes more than the city folk, on account of having to do their own washings. In the city a great many people send their washing to the laundry. But the farmer's wife can't do this on account of the inconvenience of it. And what a lessening of labor to just turn a faucet and rest while the water is drawn.

Then last but not least, is the sanitary question. How many families have lost many beloved members on account of that awful dread disease, typhoid fever, which is caused more than any other way, by using impure water. Therefore if we use a good water system such as the Leader Water Pressure System, which furnishes a system of filtering, hence we may avoid many unnecessary doctor bills besides the chance of the loss of our dear ones.

Second, how much more prosperous a farmer can be if his dairy barns are supplied with running water never too cold for the cows in winter or too warm, stagnant or bubbly in summer. All stock do better with plenty of fresh water at will. Then the poultry is more healthy and thrifty at having running water at will. Impure water has caused more diseased poultry than any other thing, for instance, stagnant troughs. And water at a hen's command causes a much better egg production, as the greater per cent. of the egg is water.

Then what a comfort to come up to all our expectations in behalf of our truck garden and small fruit. The farmer who supplies his henry with running water and irrigates his truck patch and small fruit will receive rich rewards by always having plenty of good fresh eggs to sell and nice sweet juicy fruit and vegetables, regardless of drought.

Then imagine a farmer's family all summer long of evenings with day's work finished, some in the lawn swing, others enjoying the settee, one with a violin, another with a mandolin, another with a clarinet, the father with a copy of Green's Fruit Grower, the mother with a leading magazine, the child with the "Youth's Companion" and all enjoying the sweet fragrance of the many flowers caused from this good water supply, such as the Leader System affords.—Mrs. James B. Slone.

Social and Financial Conditions in Southern California.

Written for Green's Fruit Grower.

There is no place in the world where there is a more active, energetic intellectual population than this entire coast presents. It has been the most venturesome self-reliant men of the east who came here first and conquered this coast. And this venturesome spirit of progressive activity pervades every class of society. The public schools are second to none in America and I feel safe in saying that they are a little in advance of any other state in the Union. The growth along financial and commercial lines bears witness to the foresight and activity of the people. In our section the trolley system of transportation comes about as near being up to date as any system of transportation in the world.

In the churches, too, there is a most vigorous aggressiveness manifested which has no equal anywhere. One church in this city raised one hundred and sixty thousand dollars (\$160,000) as an Easter offering to missions.

Neighborhood sociability may not be quite as warm and active here as in some other sections owing perhaps largely to cosmopolitan character of our population. But there is no place on earth where manhood is more appreciated once it is manifest than here. There is a spirit of individuality and self-reliance that is truly refreshing.

In some of our communities there is a predominance of capitalist families who are able to live on their income. Among these are many aggressive men, some millionaires, who are doing much to exploit the merits, resources of this locality. On the other hand there are too many people who come here for their health or were lured here by glowing advertisements of the railroads or real estate speculators. These have come with barely enough cash to get here and possibly make a small payment on a home. There are more of this class than can find profitable em-

ployment, I am sorry to say. Among these people there is a close approximation to real want in many cases. If we only had factories like some of the eastern and southern cities our whole population would be much more contented and happy.

There is a financial scheming going on here which has put real estate up by leaps and bounds to a fabulous figure. Land where my house stands, five miles from the center of the city, was valued twenty-two years ago at about thirty dollars per acre. Now it sells for one thousand dollars per lot, 50 x 150 feet, and land out two to six miles further is selling at twelve to fifteen hundred dollars per acre to be cut into city lots. Country real estate is held all the way from one hundred and fifty to five hundred dollars per acre and orange groves as high as fifteen hundred per acre. The wealthy capitalists, the men on easy street, are the only ones who can afford in most cases to own this land. Southern California is fast becoming the land and home of the wealthy, those who can live on their already acquired income. Of course there must be men to perform the labor and wages may be in a measure commensurate with the situation, but there is only room for about so many and the over plus of unemployed can get hungry here just the same as anywhere, but one thing is in their favor, they do not have to freeze.

There is a scheming in the handling of real estate that is much like selling stocks on a margin. You can buy a home in the city or country and pay no more than five or ten per cent. down with the balance in monthly installments of twenty to thirty dollars. This leaves the way open for a panic season to find the poor weak holders pushed to the wall and compelled to relinquish their holdings and lose all they have paid in.

It is useless for a man to come to this locality with his mind full of rosy pictures unless he has a few thousand dollars and some little capital of caution born of experience. California is all right or it would not be so rapidly transforming into a rich man's country.

Two stupendous municipal schemes are on foot in Los Angeles at present. One is the completion of an aqueduct two hundred and twenty miles long to bring the pure snow water of the high sierras near Mt. Whitney in sufficient supply for a population of three to five million people. On the way the water will be used to generate electric power sufficient to supply all the needs of the city both for power and for lighting. No scheme like this was ever put on foot before in the annals of history. There are five miles of tunnel on this aqueduct and it is to be covered all the way. The total cost will reach nearly thirty millions. The other scheme is the development of a municipal harbor at a cost of several millions.

With such stupendous planning and execution southern California climate will be raised in the appreciation of men of wealth until they will bid the price of land out of reach of any but themselves. Meanwhile the common people who are here like myself may enjoy the climate and take pleasure in the development of the country and do the best they can to serve the interest of suffering humanity.—G. D. Ballou.

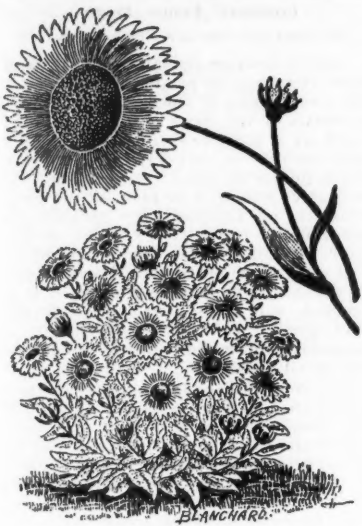
Jordan's Wild Wheat.

Dr. Aaron Aaronson, a young Palestinian agronomist and botanist, has found in the Holy Land, growing along the banks of the old Jordan, on the sides of "snow-capped" Mount Hermon, and in fact all through Palestine and Syria, the original wild wheat which prehistoric men began to cultivate over 40,000 years ago, and which has developed through the long centuries of cultivation into our present wheats—the most popular and necessary food of the human race.

"The most remarkable characteristic of this wild wheat, the thing which has raised the expectations of botanists and agriculturists, is its amazing hardness and adaptability."

"My red brothers, your great father has heard how you have been wronged. He said: 'I will send them an honest man.' He looked to the north, the south, the east and the west. When he saw me he said: 'This is the honest man whom I will send to my red children.' Brothers, look at me! The winds of fifty-five years have blown over my head and silvered it over with gray and in all that time I have never done wrong to any man. As your friend, I ask you to sign this treaty."

Old Shah-bah-skong sprang to his feet and said: "My friend, look at me. The winds of more than fifty winters have blown over my head and silvered it over with gray, but they have not blown my brain away."



Gaillardia.

In the gaillardias are found both annual and perennial plants offering a wide selection of varieties and a profusion of bloom over a long period. The blooming period begins early and continues late in autumn. They are well adapted to mixed borders and are very satisfactory as cut flowers. The stems are of good length, carry the flowers well, and keep fresh as cut flowers for a long time when placed in water.

The annual gaillardias are all propagated readily from seeds sown in the open, but earlier flowers will be secured by sowing seeds in a hotbed and transplanting the plants to the open as soon as killing frosts have passed. In either case the blooming plants should not stand closer than ten or twelve inches. They grow and bloom best when fully exposed to sun and air, and when planted on a fertile but light and well drained soil.

Miss Lady Bug.

Written by the Editor.

The windows of my house are screened to keep out flies and mosquitoes. I often find little yellow bugs with black specks over their backs inside these screens. They look like infinitesimal snapping turtles but are inoffensive. On the contrary these little insects are among the most helpful to man. Therefore whenever I see these little creatures who are likely to perish, I gather them carefully and liberate them on the lawn. Every reader should appreciate the helpfulness of the lady bug and should be able to distinguish it at sight. It is small, being not more than one eighth inch in length. It is the beautiful little bug with the black head and yellow body over which children have for ages been singing, "Lady bird, lady bird, fly away home," when they catch the little thing and see it fly away from their hands.

In California the lady bug is highly prized, is protected and bred by the million for the purpose of destroying insects injurious to farm and fruit growers. It feeds upon the aphides or plant lice. The fruit growers of northern California besiege the experiment stations for supplies of the lady bug as do the apple and cabbage growers. The grain growers of California are also asking for lady bugs to protect the wheat from aphids. Many men and boys are sent out to catch the lady bugs in nets. They are placed in crates and shipped to parties ordering them without charge. It is claimed that agriculture and horticulture could not succeed in California without the little lady bugs. We of the eastern states have not fully appreciated the work of this modest little insect. It is time for every fruit grower and farmer to learn to recognize the lady bug as one of his best friends. You may ask how it is possible for such a little insignificant insect to accomplish such results, but remember that this insect like many others, multiplies rapidly. The lady bug has also a hardy constitution and can endure great changes of climate.

Back to the Land.

I have just returned from a visit to New York city. My hotel was on Broadway. It is occupied mainly by residents of New York city and not largely patronized by the traveling public. I overheard one man telling his friend that his wife had planted four hundred peach trees the day previous. He was enthusiastic over a little farm near New York city which he owned. He was a man having large interests in New York city. He had factories, stores and warehouses, but he had nothing to say about these city affairs. His main thought was of the little farm where his industrious wife was in charge endeavoring to make the farm the most attrac-

tive thing in the life of herself and husband. This incident illustrates the tendency of city men to get back to the soil. Many of the successful business men of our large cities came from the farm. While the sons of city men are not all failures they are apt to be the sons of rich men and this is a misfortune to any person. Therefore when the farmer's boy has, after long deliberation, decided to leave the farm for the city, it may not always be well to discourage him. Not all boys are fitted for farm life. Some of them have a natural tendency for other activities which may lead them to the city. Some of them in city life may be immensely successful, while others undoubtedly may never rise above a clerkship in some store or factory. There are many readers of Green's Fruit Grower who live in cities. Most people are surprised when I tell them that many of our subscribers are lawyers, clergymen, merchants, dentists and manufacturers living in the large cities. I have found more physicians among our city subscribers than any other class. I cannot see why it is that this is so, otherwise than that physicians appreciate the healthfulness of country life and as a matter of consequence interest themselves more in farming and fruit growing.

Best Book on Fruit Culture.

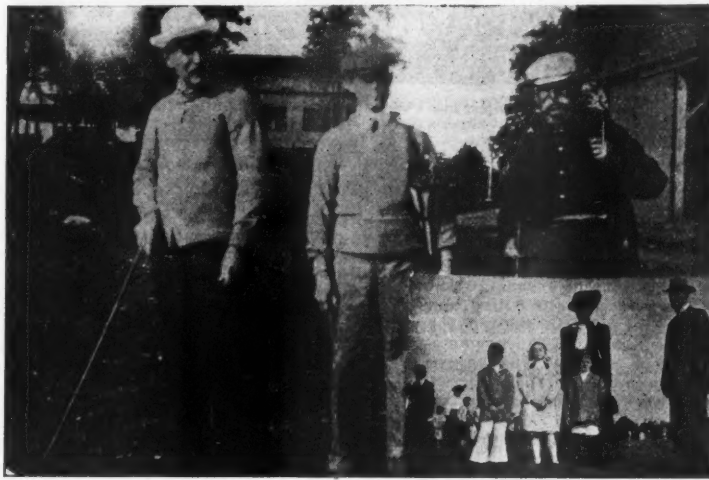
Mr. C. A. Green: I received and have read your book, "How You Made the Farm Pay by Fruit Growing." It contains many practical ideas and instruction. But I want to know more. You can probably suggest the book best suited on the subject of fruit growing and

first. Then stop cultivation, but begin cultivation the next season as early as the ground is dry enough, and continue cultivation each year from early spring until August first. Do not try to plow very close to the peach trees for that would be almost impossible. The growing roots of the peach trees are far distant from the trunks of the trees. From what you say I judge that the soil is rich enough. Disturb the roots of the trees as little as possible in plowing.

Have I Made a Mistake?

Charles A. Green: I have a small pear orchard of a few hundred trees and it came on wet so my men could not do any farming and I set them digging around the trees, about 18 inches around each tree, and then had them put about one-half bushel of horse manure around each tree and then put the turf back again wrong side up. Did I do right or will the manure injure the trees? There will be about two inches of manure as it is spread out and it does not touch the roots. I have made some mistakes about my orchard and I do not want to make any more.—Samuel Avery, N. H.

C. A. Green's reply: Your trees will not be injured by the digging and manuring if the roots have not been disturbed. You do not state how long your pear trees have been planted. Remember that if the trees have been planted eight or ten years the feeding roots are not so close to the tree as the narrow circle in which you have dug the sod and placed the manure, but are ten to fifteen feet distant. If the trees are only two or three years planted the



This picture represents the editor and his friends on the golf grounds of our local country club.

gardening, or each a separate book. I now have over 600 peach trees on my farm which is occupied by good gardeners. If I can get them to take the care I think the fruit demands will not only increase the peach planting, but will add other kinds of fruit. They are splendid men and by getting them educated practically it must be done by reading practical books (of authority) on the subject for I have only the ideas as others that observed but not studied the subject. For instance, there is 500 of my peach trees five years old, they have not been cultivated for three years, the land was new ground, as we call it, and very rich, there is now weeds and especially ground ivy covering it completely, the weeds were mowed off each year before seeding but the ivy still grows. The trees are tall but have a fair crop of peaches on at present. I want this ground cultivated as clean as a field of corn but not so deep. They think it would cut so many small roots near the surface that it would injure the fruit and trees. If not too much trouble would like to have your advice on this and name of best book on fruit culture.—John Reed, Pa.

C. A. Green's reply: In reply I will say that there are many helpful books on this subject but none give all the information desired. Samuel B. Green, Prof. of Horticulture, in the University of Minnesota, has recently issued a book on popular fruit growing which Green's Fruit Grower offer to mail, postpaid, for \$1.00. But it is not possible for a fruit grower to qualify himself for taking charge of an orchard, vineyard or berry field through any one book. He will find questions arising which no book will answer to his satisfaction. What the fruit grower needs is a fund of practical information contained in his own head gathered by years of practical experience with plants, trees and vines.

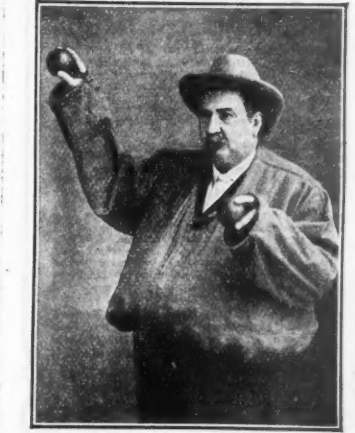
I would plow the peach orchard which you say has not been cultivated for three years. Plow it as quickly as possible, as shallow as possible, and keep the soil cultivated until August

digging and manuring will be far more helpful than would be the case if the trees have been long planted. When pear, apple, plum or other fruit trees have begun to bear fruit the trees should not be fertilized or cultivated as you have done. Then the entire surface of the soil from row to row should be plowed and cultivated and kept free from weeds and grass from early spring until August first and any manure or other fertilizers that may be applied should be spread broadcast over the entire surface of the orchard. Half the roots of the trees will be found to extend as far or further than the branches of the trees. So you see that in a bearing orchard if you simply fertilize the ground near the tree the feeding roots will not reach it in any marked degree.

The trees you have planted this spring would be benefited by a mulch of manure or inverted sods such as you speak of. Do not fail to cut back all the branches of every tree planted this spring leaving simply short stubs of branches six inches long. If every reader who has planted trees this spring would cut back the branches as I request and mulch the soil over the roots with manure placing no manure next to the roots of the trees, every one of the trees planted will live if planted at the proper depth.

For little chickens, after they are a week old and have begun to grow, the best mixture is cornmeal, oatmeal and bran. They should also be able to get some millet, sunflower or a little linseed in the form of meal occasionally. The last three articles help to feather them out quicker than if they fail to get it. They should have chopped boiled meat once a week. Boiled onions chopped up with the meat is splendid. If alfalfa meal is to be had, teach them early to eat it in the form of mash or mixed with the bran. Change the proportions of all foods from time to time. A little bonemeal with the mash occasionally should be used if alfalfa meal is not available.

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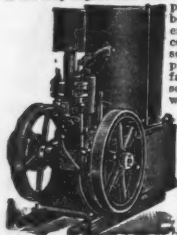
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for 4 Buggy Wheels, Steel Tires. With Rubber Tires, \$15.50. I manufacture wheels 4 to 4 1/2 in. tread. Buggy Tires \$3.50, Shafts \$2.00, Top Buggies \$35. Harness \$6. Learn how to buy direct. Catalog free. Repair Wheels, \$5.50. Wagon Umbrella Pans, W. M. 5000, \$4.00.

SAVE YOUR FRUIT TREES

Kill San Jose Scale, and all other parasites and insects, by spraying with a strong solution of

GOOD'S CAUSTIC WHALE OIL SOAP No. 3

Nothing to injure or poison trees, plants, vines, or shrubs. No sulphur, salt or mineral oils. Dissolves easily in water. Used and endorsed by U. S. Dept. of Agriculture. 50 lbs., \$2.50; 100 lbs., \$4.50; larger quantities proportionately less.

Write to-day for free booklet on Plant Diseases.

James Good, Original Maker, 953 No. Front Street, Phila.

Farm and Garden



A beautiful photograph of boy fishing from a boat. Farmers boys would be more contented on the farm if they had a place like this for fishing.

Going Fishing.

There is great delight in going fishing. It is pleasant during the winter months to think of the time in June when we can wander across the meadows to the side of the brook, creek, river or lake, and from the shore or from the boat cast our baited hook into the water for fish. It is lawful for every one to go fishing at the proper season, but there is no man who enjoys these outings so much as the man who has earned his vacation by having done some useful work, or accomplished some great purpose. If the reader of Green's Fruit Grower has planted an orchard this spring, a vineyard or berry field, or if he has beautified his home with the planting of ornamental shrubs, vines and trees he should be in a frame of mind to enjoy going fishing. I can imagine the feelings of this man as he gathers together his fishing tackle and throws over his shoulder the strap of his fish basket and starts out for the day or week's vacation. He is conscious of having done the right thing for himself and for humanity. It is ever so in the greater affairs of life. The man who has done the wise thing, the just thing, the proper thing, is repaid in the satisfaction which comes to him independent of the principal reward that is the harvest.

Timely Stable Hints.

Prevent horses from being rained upon if possible when they are very hot.

Give a colt range rather than confinement to make a good horse out of him.

The disposition of a horse has a great deal to do with his value on the farm.

When two horses become accustomed to working together, don't change them. Do not bang the bits against the horse's teeth. Be patient and he will open his mouth.

Always see that the horses are well shod when traveling on slippery streets or icy roads.

Feeds rich in oils will keep the coats looking well, but they can't supplant the currycomb.

Never teach your horse to start faster than a walk, as it may sometime assist you to avoid an accident.



Fundamentals of Insect Life.

P. J. Parrott, Geneva Experiment Station (N. Y.).

Considering the question why insects are so much more prominent than other animals as foes of the farmer, the first reason is their tenacity. They adapt themselves readily to changed conditions. The second reason is their marvelous strength, illustrated by the grasshopper, ants and wood-boring insects. Third, their capacity to consume. The flesh-eating larva consumes two hundred times its own weight on the first day of its existence. Some caterpillars increase 10,000 times their own weight, and a few defoliate a tree. The fourth reason is the prolificness of insects. The San Jose scale has five million offspring in the course of a season. The white ant lays sixty eggs a minute, or 80,000 a day. A single specimen of the hop aphid will, in a season breed ten sextillion others.

Because of these qualities, insects are exceedingly formidable and destructive. Insect losses are difficult to estimate. From the chinch bug, \$60,000,000 annually; codling moth, \$20,000,000; potato bug, \$8,000,000; San Jose scale, \$10,000,000; cereal pests, \$20,000,000; truck crops, \$53,000,000; fruits, \$27,000,000; total, \$785,000,000, or more than the running expenses of the government, including the maintenance of the army and navy. It costs more to keep these insects than it does to educate all the children in the United States. The loss by insects is more than twice that by fire. Nor does this include the losses to business and society by deaths from typhoid, malaria, yellow fever, bubonic fever, diseases which are largely spread by such insects as house fly, mosquitoes, fleas, etc.

Insects take their food in one of two ways, said the speaker. One class is provided with distinct jaws to masticate portions of wood, bark, leaves, fruit or flowers. Examples are caterpillars and beetles. The other class has sucking beaks, which are inserted through tissues of bark or leaves to extract the plant juices. To this class belong plant bugs and pear psylla. The insecticides with which the first-named class should be combated are poisons, such as paris green and arsenate of lead. The second class should be attacked with contact remedies, such as whale oil soap, kerosene emulsion, sulphur wash and fumigation. The farmer should study the habits and nature of the particular insect which is troubling him, and from the knowledge thus gained determine the character of the insecticide to be applied. Otherwise, there will be disappointing results.

Farm for sale or to rent in New York state. Booklet free. Address New York Central R. R., Grand Central Terminal, New York City. W. C. Bower.

Concrete Fence Posts.

Written for Green's Fruit Grower.

Concrete—cement, sand, gravel, and water combined in proper proportions—has become one of the leading building materials of the day. It has shown its worth as a substitute for wood; houses built entirely of cement, the trimming and supports of wood being merely for decorative effect; it is used by the government, by railroads, by farmers in hundreds of ways, either alone or reinforced; and has been found to produce even good fence posts. Its moderate cost, its durability, the ease with which it is handled, the wide distribution of the sand, gravel, and stone of which it is composed, commend it to the consideration of all builders.

As a material for fence posts concrete has been found to possess but few of the disadvantages of wood, to have practically all its advantages, and to be superior in some respects to timber. Of course, the first cost may be more or less than the best wooden posts, but that depends on local conditions—the timber supply, the deposits of sand, gravel, and rock, and the skill of the workman. If manufactured as usual and cured for three months concrete posts are as good as the best wooden posts. After three years wooden posts possess only one-third to one-half of their original strength, whereas concrete grows stronger with age and needs no repairs as neither weather nor fire injures it. Under ordinary circumstances concrete posts will last forever; and even if in the course of years a few should be broken by unusual strain, it is cheaper to replace them than to replace an entire fence of decayed posts with a material with the same lack of durability.

Concrete posts can be made either square, triangular, or round, either straight or tapering towards the top. They can be purchased from dealers or made at home, and this latter plan together with suggestions as to the construction of the fence after the posts are made and cured is the theme of Farmers' Bulletin No. 403, U. S. Department of Agriculture, Washington, D. C. It takes up in detail the selection of sand, gravel, crushed rock, and cement; the choice of molds—either steel or wooden, and if wooden, the proper way to make square or triangular molds. Re-enforcement—the insertion of steel rods or wire in the molds when making the posts, is discussed as to the principle involved and the kinds of re-enforcement best suited to certain needs. The work of mixing, molding, and curing is explained with minuteness, and the variety of styles which can be produced described. Nine illustrations give detailed drawings of molds, methods, and results. The pamphlet closes with a warning to persons intending to buy post molds, either steel or wooden, to beware of traveling agents who are selling molds or rights for the sale or use of their respective molds. No dealings should be had with these agents except when fully satisfied through reports from one's banker or lawyer that the company represented by the agent is reliable and that the agent is their authorized representative.

The Boy on the Farm.

All sorts of reasons have been given for boys leaving the farm. Prof. L. H. Bailey, of Cornell University, investigated four hundred cases and found that the majority said they were leaving because the farm did not pay. Of the others, the most numerous reasons were too much hard work and lack of social advantages. Prof. Bailey thinks these were the real reasons but that the objections are being overcome. A canvass of 178 New York farmers showed in Prof. Bailey's opinion that a man is likely to get as much return on his capital under present conditions on the farm as elsewhere. The total average net income was figured as equal to \$500, says "Cultivator." Prof. Bailey insists that no other business would do so well for a small investment. These farms were above the average of the state, but Prof. Bailey insists that farmers who are not successful would not succeed in any other business. It all simmers down to a call for the right men on good farms; men thoroughly waked up and determined to tackle the farm for all they can get out of it and for all it can put into them. Such a farmer can hammer out a career of which no man need be ashamed.

"I never had any other desire so strong, and so like to covetousness, as that one which I have had always, that I might be master at last of a small house and large garden, with very moderate conveniences joined to them, and there dedicate the remainder of my life only to the culture of them, and study of nature."—Abraham Cowley.

Gardening in Europe.

If we would live by gardening we must study the ways of gardening. It was a shrewd old English farmer who used to say to his sons, "Put the horse to, and let us drive round and see what other people are after."

The French market gardeners about Paris are the most skillful growers in the world—except the Chinese—and the average garden of an acre or two "tilled to the eyebrows," as they say, shows the following returns, given by our consuls and business men interested in the matter, says "Youth's Companion."

"There are, of course, exceptions, where the total income from one acre is \$6000; but as a usual thing the gardens yield but \$1500 to the acre, and the average annual profit of the gardener is not over a thousand dollars."

Within a ten-mile circuit of Paris are 2000 market gardens, models of care and culture, some of which have been held by the same families for 200 years. These gardens are not large; the largest is said to be not more than four acres, common gardens are not more than two acres, and not the smallest profits are taken from plots of a quarter acre, tilled with the finest care.

The skilled French or Belgian gardener takes four to seven crops in a season from the same rich soil. There is no magic in it. The marlacher, or marsh gardener, turns over the old mushroom beds of the season before, forks them up roughly so that the air works among the clods freely to carry off the acrid gases of decomposition—"to sweeten the soil," as he says. In a few days it grows powdery and is beaten and raked to a level and three to nine inches of fine soil, not too fine, are sifted over it to make the seed bed.

Then radish seed, turnips, or carrots of the small, tender, quick-growing sorts are thinly sown and pressed gently into the earth. On this same bed twenty-five lettuce plants with leaves the size of a half dollar are set out, very likely with four or five cauliflower under the same glass. In the rich, warm, soil, with plenty of water, the plants have nothing to do but to grow as fast as possible and get out of each other's way in succession.

The radishes are fit to pull in three weeks, the turnips and carrots in five to six weeks, the lettuce being headed and cut a fortnight before. Then the cauliflowers have room to spread with a melon vine or a cucumber in the middle to riot over the whole three by four feet enclosed, when the cauliflower heads are set out again in the open field.

The Use of Bacteria in Butter Making.

By Walter G. Sackett, Col. Agri. College.

Those who are engaged in butter making as a profession consider that the two most important factors in good butter making are clean cream and proper ripening. The former can be obtained only by the most scrupulous care on the part of those who are entrusted with the handling and the latter is accomplished best by the use of what is known as commercial starters. These are pure cultures of acid-producing bacteria capable of imparting a desirable flavor to the butter.

The bacteria that are normally present in cream, and in the end find their way to the butter, are in a large measure responsible for the flavor, and if it happens that filth germs dominate, which is apt to be the case in natural ripening, the butter will have a strong, rancid flavor and odor. When the commercial starter is used in ripening the cream, immense numbers of bacteria, capable of producing an agreeable flavor, are introduced; the growth of the undesirable is checked and many of the unpleasant flavors already produced are covered up, so to speak, either wholly or in part.

The cost of these commercial products is so small, and the method of using them is so simple in comparison with the benefits to be derived, that their more general use is to be recommended. The initial cost of a starter is about fifty cents, and by careful handling, it can be propagated for an indefinite period.

Pure culture starters are put up by the different manufacturers in two forms; one, a powder, and the other, a liquid. They are for sale under trade names such as Butter Culture, Flavorene, Lactic Ferment, etc., and can be procured either directly from the manufacturer or through any drug store or creamery supply house.

It is, in round numbers, sixty-six years since the first locomotive engine was imported into the United States for use on an experimental railway, and about sixty-five years since the first locomotive was built in America.

Plowing and Harrowing in One Operation.

Several companies are now manufacturing what is known as a "Harrow Attachment" for plows. This attachment is made to be used in connection with the plow, usually of the sulky or gang type. By its use the ground is harrowed or pulverized as fast as it is plowed.

Every farmer knows that there is no time when plowed ground will pulverize better than immediately after it has been turned. At this time there has been no chance for moisture to escape, and by harrowing at once, the ground is not only better pulverized, but is placed in a condition to conserve the moisture better.

By using this harrow attachment in connection with the plow, there is no need of going over the field again to put the ground in condition for the crop. The field is harrowed as far as plowed at all times. Ordinarily less than one-half of the energy exerted by one horse is required to pull it.

This type of harrow is made in several different styles and widths. In width it varies from about eighteen inches for a single plow to three feet for a gang plow. It should have a lever adjustment so that it can be forced into the ground as deeply as desired. We have every reason to believe that this attachment will be much more generally used in the near future. It is certainly a tool worth recommending. Its cost is within the reach of all.—H. M. Bainer.

A horse should fear the whip rather than feel it.

Teach a team to pull a light load right and they will pull a heavy load right.

Never train a team on a heavy load. Never scold a team for breaking an even.

Load light at first, and heavier afterward.

Never pull a team when they are out of breath.

Do not allow a team to stop at will but stop them soon afterward.

Short stops and often, is the rule for resting horses.

As a rule, when horses are overdone it is done inside of a few hours.

A horse will seldom run away if he will stop when told to do so.

It is all right for your horse to have speed if you never find it out.

Move a little yourself to get started, instead of asking your team to make up lost time.

A horse, like a boy, should be taught to mind because he wants to instead of because he has to.

The heavy, well muscled jaw is a sign of strength in a horse.

A horse is no better than the feet he stands on.

The way to get a good, fast walking team is to not overload and not trot them. Two 1200-pound horses, on a fourteen or sixteen inch plow are overloaded. They are loaded too heavily to walk three miles an hour. Three horses on the same plow will make the work lighter and reduce the cost of plowing.

Fruit and Vegetables.

Clean culture aids coming crops. Three to five good berry canes are enough for a hill.

Here are four p's ready for use—plow, plant, prune and s(p)ray.

If you would grow fine raspberries set and keep them in hills 3 x 6 feet. Borers in the peach and plum will be busy now. Hunt them in time.

Bees in the orchard are needed for pollenizing the bloom. The fruit and honey will pay all expense of their keep.

A most excellent fertilizer for the garden and fruits is made of 300 pounds ground bone and 200 pounds muriate of potash.

If hard, dashing rains occur before the beans and melons are up, a rake used carefully will break the crust and help them through.

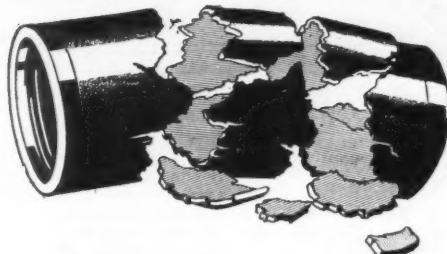
When the blackberry canes reach a height of eighteen inches they should be nipped off. A sharp butcher knife makes a short job of it.

Fertilizers for currants are important. A heavy application of stable manure should be given them yearly and all canes removed after their fourth year. This will give you big berries.

For home use plant Golden Bantam sweet corn every ten days or two weeks up to July 1 or 15. It's the finest of all varieties and sells well to a private trade, but the small ears and color are against it for general market.—"Farm and Home."

Cure for Ringworm.—The ringworm is easily cured. Paint the affected surface two or three times a day with colorless iodine; or, wet up common black gunpowder with a little vinegar and apply twice a day.

Crash!!—another wax record gone to smash!



If you own a Phonograph or Graphophone (Edison or Columbia) never buy another wax record for it. Get one Indestructible Record from your dealer.

Or let us mail one to you;—35 cents (for the 2-minute) or 50 cents (for the 4-minute), postage free, and a catalog with it. Give it the hardest possible test. Lend it to the youngsters. Toss it on the table. Drop it on the floor. Kick it across the room. Leave it in the sun. Then play it and hear a finer, clearer, purer, stronger reproduction—better music in every way—than your machine ever gave out before. Play it every day for ten years and you will still have it, good as new. Almost too good to be true? Try it! Prove it! Send for one!

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1351 Tell Mother I'll Be There (Sacred Mixed Quartette)
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4 Minute—50 Cents

- 3032 Summer Reminds Me of You (Tenor Solo)
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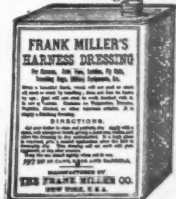
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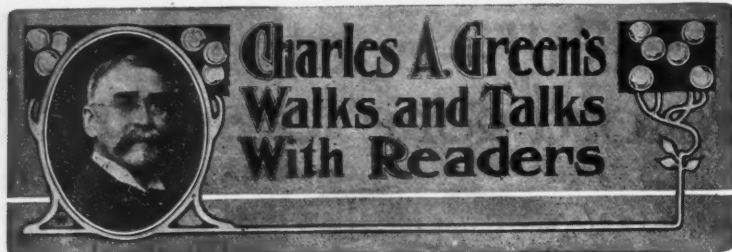
Occasionally a dealer may try to substitute something on which his profit is larger, but the majority will recommend the old reliable Frank Miller's.

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ROCHESTER, N. Y., JULY, 1910.

Courage backed up with caution leads to success.

He was so stingy—he would not button his overcoat for fear of wearing out the button holes.

Don't invest all of your money in an umbrella for you might lose it, or it might be stolen.

Every man would like to be a hero. There are few wives who think their husbands are heroes.

If your aim is to kill competition and competitors you will have no time to build up your own business.

Have you ever known a man who did not think that he could run a hotel, write a catchy advertisement or poem?

We must not expect that every man will see things as we see them. Each man has his own way of looking at things, and it is well that it is so.

It is sometimes better for your own interest that your friends and the public should underestimate you. It is certainly unfortunate if they overestimate you.

Not every man enjoys fine paintings, sculpture, architecture, literature or beautiful landscapes. Not every man sees beauty in trees and birds. Let us not complain for in the end all things will be admired and enjoyed by some one.

To Convert Cider into Vinegar.—Flora Smith, of Michigan, writes Green's Fruit Grower stating that a quart of white beans placed in each barrel of cider will turn the cider into vinegar in a few weeks. She has seen the strongest kind of vinegar made in this way in a short time. This in reply to Mr. C. E. Meinett.

It is a mistake for any person when talking with another to press close against the other individual. By getting so close to the person with whom you are conversing you are liable to take or communicate disease germs, and if the person you are talking to is a man he may suspect that you are endeavoring to smell his breath in order to learn whether or not he has been drinking.

Loans on Farms.—I am a trustee of a savings bank at Rochester, N. Y. I have made inquiry and find that of late years there are few applications by farmers for loans on farms. Our savings bank would be glad to loan money on good improved farms in Monroe Co., N. Y., at 5 per cent., but farmers have been so prosperous of late years the banks have but little opportunity to make loans on farm lands.

Barberry Hedge.—In reply to J. A. Smith, I will say that Barberry are generally transplanted for hedging when two years old. Set the plants twelve to eighteen inches apart in a single row. Trim back the branches each year both on the two sides and the top. Raffia is a fibre used as string for tying buds recently inserted in nursery seedlings. The inner wood of the basswood bark makes strings similar to raffia after being soaked in water for a month.

Do you know that the American Indian has had no written language until such a language was invented in recent years by the great Sequoyia? This Indian was an untutored savage but he accomplished wonderful things. The invention of letters which enabled the Indian to read and write and thus express himself invented by this savage accomplished that which it took the Egyptians, Phoenicians and Greeks three thousand years to create. Think of the people unable to read or write having no symbols to express their language as we have in letters.

Most people look their worst when posing for a photograph. If they smile it is not a healthy smile, if they look stern it is not healthy gravity, if they assume an attitude of ease and grace,

the attitude is artificial and affected. If the photographer could catch us unawares and take our photographs without our knowing it, how much more attractive we would be. The same is true of our attempt at speechmaking on the platform. If we could be natural, if we could be ourselves and talk as freely and easily as we do to our friends and companions, how much more attractive and effective we would be. Self-consciousness is the foe of art and oratory.

My friend, Mr. Lamberton, has spent much of his life in the Adirondacks. He has ever been an enthusiastic hunter and fisherman. He has for many years been a contributor to "Forest and Stream." He can remember when wild pigeons were so plentiful in the Adirondack mountains as to darken the sky as they passed over in their migration. He has seen the branches of trees in the Adirondacks broken down with the weight of the nests and the birds, and has known farmers to drive into the woods where the pigeons were with wagons, filling their wagon boxes with the young birds which had fallen to the ground owing to the breaking of the branches.

Roosevelt's Speech.—That was a great speech of Roosevelt's before the German university. He said that man for many ages, possibly hundreds of thousands of years, scarcely progressed at all, or at least very slowly. Then on a happy day some man discovered fire. This discovery enabled the human race to advance rapidly above the beast, which he must have been closely allied to previously. Then came other discoveries, and with each new discovery the human race developed with greater speed. But it is only within the last four hundred years that the great achievements of humanity have been secured. Think of this in consideration of the fact that man has inhabited the earth for possibly 500,000 years.

Clergymen properly take a decided stand on the question of temperance or rather to teetotalism, but clergymen have but little actual knowledge of social drinking or of drunkenness. Their information on these subjects is accumulated from others. If I were to ask the average clergyman how much whiskey or other similar intoxicant he might expect the average drunkard to have consumed during a life time of fifty years he would be unable to make even a guess, whereas it is known that such a drunkard on the average might be expected to have consumed many hogsheads of liquor as strong as whiskey, giving evidence to the fact that moderate drinking does not always produce a drunkard. The fact is that the drunkard, the man who abandons himself to the use of intoxicants is the rare exception.

Cows Good Swimmers.—Cows, horses and nearly all farm animals swim naturally without having been taught. The Minnehaha steamship recently ran on to rocks within a mile or two of shore. Twenty-four head of cattle were forced out of this ship into the sea without much skill or effort to save them, and yet all but ten reached the shore safely. Other valuable cargo was dumped from this wrecked ship into the sea without hope of saving it. Some of the cattle may have been killed by rough handling before they reached the water. All of them were dumped helter skelter into the water into which they sank deeply before the final rise which enabled them to begin swimming for the shore. Even the squirrels and rats are good swimmers naturally. Man claims to be superior to the animals in every way but every boy or man must be taught to swim. Some people cannot be taught to keep afloat in water.

Choking on Waking.—There are many people who on waking from a nap and after a night's sleep have a choking sensation the moment they wake. My doctor tells me that this choking is caused by sleeping with the mouth open

which causes the throat to become dry. I have cured myself of a case of chronic sore throat by inventing a device which keeps my mouth closed during sleep. This device consists of a band that buckles over the head and under the chin, with another band passing around the crown of the head, connecting with the other band on each side. This is something like the mask that baseball catchers use only it does not cover the face. But even a handkerchief tied over the head and under the chin will do much to keep the mouth closed during sleep.

Sad Strawberry Blossoms.—When I was beginning to grow fruit, when I was a poor man and my success depended upon the products of my plants, there came a severe frost when the strawberries were in full bloom. This seemed a crushing blow for I had worked hard and was relying upon the revenue that the strawberries might give to carry me through the year. Sadly I strode through the roadway to the strawberry field, on that cold and frosty morning after the sun had risen. As I am something of a poet, when I saw these strawberry plants I imagined each blossom to be a sympathetic face looking up at me with tears in their eyes, for the center of every blossom was blackened with death, and with them my hopes were blasted. But there were parts of the plantation bordering the woodland in which the blossoms were not at all injured. Probably the warm air from the woodland kept the frost from injuring the blossoms bordering the woods, therefore I secured a partial crop of strawberries, and these, selling for an extra high price, helped to replenish my impoverished pocket-book.

Buried Alive.—There is fear in the minds of many people about being buried alive. This fear is largely caused by sensational stories, that is fiction. The story writer aims to tell of things sensational and what can be more sensational than the question of being buried alive? The fact is that in the history of the world there have been scarcely any well authenticated instances where people have been buried alive after supposed death. It is well however to remember that the recuperative force of the body is marvelous. It has been found possible to revive those who were supposed to be drowned an hour after they had stopped breathing and the heart stopped beating. People who have apparently died suddenly have been known to come to life again after the lapse of considerable time. There are however indications of death that cannot be mistaken. Therefore those of us who are living among our friends should have no fears of burial before death.

To Improve Agricultural Conditions in New York State.—In order to illustrate the great interest taken at the present time in improved agricultural conditions in this state I call attention to a recent circular signed by the president of the New York Produce Exchange and by various chambers of commerce and leading railroad lines calling for a meeting at the board rooms of the Produce Exchange, New York city, on April 27th, 1910, to discuss informally the establishment of some permanent organization for the improvement of farming and farm land. The reader will see that this question of the productiveness of our farms is a vital question not only to farmers and fruit growers but to railroads, boards of trade, chambers of commerce and in fact to every individual. Thus if you decide this year to increase the product of each acre of your farm you will not only increase your own revenue and self respect but you will be a public benefactor, inasmuch as your efforts will lead to the better feeding of the large number of worthy people and to the welfare of the world at large.

No person should be satisfied with anything but his best work. The farmer and fruit grower should be as ambitious to excel in the production of farm crops as the artist, orator, the doctor, or the lawyer is ambitious to excel in his particular work.

Flies and Mosquitoes.—A correspondent writes us that he has a beautiful mountain home where he could greatly enjoy life were it not for the mosquitoes which torment him night and day. While it may not be easy to avoid flies and mosquitoes it is possible to lessen their numbers by destroying their breeding places. Flies breed in stable manure and filth. Mosquitoes breed in any kind of standing water, a pond, hollow in the lawn, an old tin can that holds water or a tub of rain water at the corner of the house. The wrigglers

you see in the rain water all summer are immature mosquitoes. It is not difficult to prevent flies and mosquitoes from entering the house, thus the man who is disturbed in his sleep by these insects is himself to blame. Rustless screens are now made of aluminum wire. It is not necessary to make frames for these wire screens as the screen can be tacked over the window casings on the outside so as to cover the entire window from top to bottom. If you cannot afford wire screen tack mosquito netting over the entire window, but this will last only one season. I make war on every fly or mosquito which enters the house. I find that by destroying one fly in the early spring I destroy fifty thousand which might be bred by this one fly during the summer months. Flies and mosquitoes are not only annoying but they convey diseases and death to man. A fly eating poisonous filth outdoors may dart in the doorway and convey filth and germs to our cream and milk, butter and pastries. In this way germs of typhoid fever, consumption and diphtheria may be conveyed to members of our family.

China May Teach Us How to Fertilize Our Land?

The great question for farmers and fruit growers is how shall we keep up or increase the fertility of our soil. Our soil management at present is that of a new country. We have found a soil made fertile by the accumulation of plant food of ages. We have continued to plant this fertile soil drawing upon its fertility without adding to the fertility as much as we have taken away. It is impossible for us to continue this kind of farming and escape bankruptcy for it requires as much seed and as much labor in preparing the soil and in harvesting to secure half a crop as it does to secure a full crop.

There is considerable expense necessary in keeping or making the soil fertile. In China, the oldest country in the world, the farmers often spend nearly as much as one third of the value of a crop for the fertilizers applied to the soil that year. Where will you find an American fruit grower or farmer who fertilizes as liberally as this?

We hear about the decline of American farms, particularly in the eastern states. This decline of fertility is not necessary for we have in China an example of soil that has been cultivated over and over for thousands of years and is now richer than ever before, owing to the annual application of fertilizers. The people of China seem to have solved the problem as to what class of fertilizers are necessary for certain crops and certain soils.

China, India, Japan and other oriental countries could not possibly support their large populations without conserving every form of fertility possible. In those countries half of the people would starve if the fertility which escapes into the sewers and lakes and harbors of America escaped in the same way in those eastern countries. One of the great problems which confronts this country is the pollution of streams, lakes and ocean harbors by sewage, which should not be thus allowed to be wasted, but should be applied to the soil as a fertilizer.

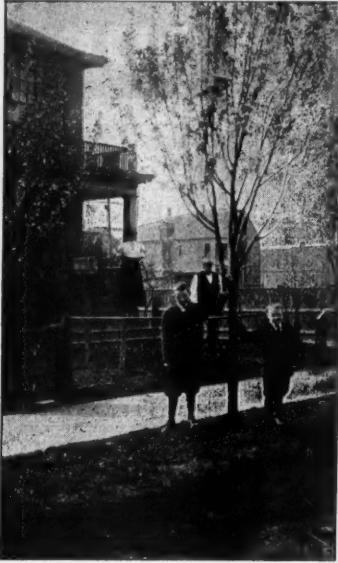
The present method of soil culture prevailing in this country is nothing more or less than soil robbery. The sooner we awake to this condition of affairs the better for all concerned.



There are many birds considered by farmers as enemies which are helpful. In fact all birds are helpful though some are far more helpful than others. The crow helps the farmer by destroying large numbers of white grub, the larvae of the May beetle. Black birds and robins also destroy this grub. When you plow you will find these birds following in the furrow to pick up the grubs and worms if they have not been disturbed. The crow is also fond of field mice and mole. The screech owl is a rat and mouse catcher. If you find the screech owl in your barn allow him to remain feeling sure that he will destroy many rats.

"The road by precept is long and tedious, by example short and effectual."—Seneca.

WALKS AND TALKS—Continued.



I have long been a subscriber to Green's Fruit Grower. I notice that you desire photographs of fruits, orchards and berry fields. Therefore I send a photograph of my house with members of my family. In this photograph is shown conspicuously a Duchess pear tree ordered from Rochester, N. Y., eight years ago. It bloomed last year for the first time. This year it is one grand mass of flowers. Its branches have been cut back each year and still it is twenty feet high. The people laughed at me when I planted this tree and said that my boys, shown in this photograph, would get all the fruit and that I would get none. My answer was that I would take pleasure in seeing the trees grow even if I secured no fruit.

Note by C. A. Green: If this Duchess pear tree is a dwarf tree as I assume it is I call the attention of readers to the fact that it is not pruned as dwarf trees should be pruned, but is pruned as a standard tree might be pruned, but the top is too high even for a standard pear tree. A dwarf pear tree should branch out as close to the ground as possible. The ends of the branches, that is the new growth of the past year, should be cut off each year, leaving but four to six inches of the new growth on all the branches. By this close annual pruning dwarf pear trees never grow higher than from six to eight feet. If they grow higher than this they are liable to be blown over or broken off. It is a mistake of many people to grow dwarf pear trees the same as they grow standard pear trees. But of late years all trees, whether pear, cherry, plum or apple are trained with low heads whether dwarf or standard. This method of pruning makes it easy to gather the fruit, to spray the trees and to prune them. We congratulate our subscriber on his beautiful home and attractive family.

Smoked to Death.—The doctors who attended Mark Twain during the last year of his life will not concede that smoking pipes and cigars hastened his death but it is my opinion that no man can smoke to excess as Mark Twain did without doing himself injury. He not only smoked the strongest cigars but smoked them continuously, going so far as to wake up in the night two or three times to smoke.

The doctors who attended King Edward who died recently will not concede that the life of this king was shortened by excessive smoking. The king smoked very large cigars which cost him one dollar each. The ends of the earth were ransacked to find seductive brands of tobacco from which the cigars smoked by King Edward were made. These cigars were so alluring the king could not be restrained from continuous smoking. He was a hard man to control in anything he undertook. He was a wise man and a great diplomat and a blessing to his country in his last years, but he would not follow the advice of his physicians.

The lamented President McKinley might possibly have survived the pistol shot he received if his heart had been in prime condition said his doctor. But McKinley's heart was weakened by excessive smoking. His heart was not strong enough to carry him through the terrible strain of the weeks following his attempted assassination. The same can be said of Mark Twain and of King Edward. When attacked with disease their hearts were not strong enough to pull them through, hence their death. Here is a warning to the smokers. The tendency of every smok-

er is to smoke more and more as the years go by, till after a lapse of many years nothing but continuous smoking will satisfy, and this means early death.

Location for Farm House and Water Supply for House.

Mr. C. Robotheun, of N. J., is about to buy a farm home so that he can live outdoors with the birds, trees and flowers. He asks whether he can have running hot and cold water with bath in this farm home which is supplied with water from a brook, from a river and from a well. He also asks whether a southern exposure is the best for a farm dwelling.

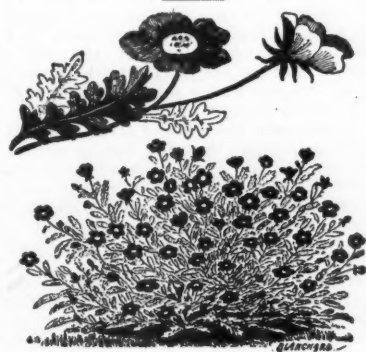
C. A. Green's reply: Any farm home can be equipped with hot and cold water and bath the same as a city house with this exception: It will be necessary to have a hot and cold water tank in the attic, which can be supplied by a force pump leading to the well, or by a hydraulic ram, or a stream near by, or by a wind mill. Water can be drawn from this tank in the kitchen and in every other part of the house. There must be a lining around the outside of the tank and sawdust or a similar material packed around the tank in the attic to keep it from freezing in severe winter weather.

A southern exposure is not absolutely necessary for any home. In a very hot climate a southern exposure might be objectionable on account of heat. My Rochester home faces the north. On the north front there is a piazza sixty feet long and ten feet wide which is remarkably cool throughout the summer months. My house is cooler in summer and equally as warm in winter as those that face the south. I consider an eastern exposure of greater value than a southern exposure. The side of my house that faces the east is particularly attractive. Every morning when I sit down at my breakfast table I have a beautiful stretch of country opened up to my view, generally filled with sunshine which is an inspiration helpful throughout the day. It is a good thing to be able to start the day's work with the world before you bathed in sunshine as it is from the eastern windows of my dining room, sitting room and kitchen.

Fourth of July Celebrations.—An intensely practical aspect of the dangers of Fourth of July celebrations is presented by Mrs. Isaac Rice, president of the New York society which is endeavoring to mitigate the folly and disasters attendant on the usual Fourth methods of showing patriotic fervor. Mrs. Rice brings together the casualties at seven famous engagements of the Revolutionary war and compares them with the casualties of Fourth of July celebrations in this country year by year during the past seven years. Here is the tabulation:

Battles—Lexington, Bunker Hill, Fort Moultrie, White Plains, Fort Washington, Monmouth, Cowpens, killed and wounded, 1119.

Fourth of July celebrations—From 1903 to 1909, killed and wounded, 34,603.



Nemophila.

The representatives of the genus Nemophila are dwarf, compact-growing, hardy, annual herbs, which produce an abundance of showy bell-shaped flowers from early spring to late autumn, for which reason they are esteemed for borders and for bedding purposes. All the species may be propagated from seed. If the seeds are sown in the open about the middle of August and then transplanted in late autumn very early flowers may be obtained. For summer and late fall blooms the seed may be sown in the open in April and not transplanted. The nemophilas love a moist loam, with partial shade, and produce an abundance of showy flowers, which are very valuable for bedding and for cut flowers. The whole plant is more or less hairy.

"If the true did not possess an objective value, human curiosity would have died out centuries ago."—Renan.

From Bakery to Farm

Soda crackers are a long time on the road to the country store, and from there to the country home. But

Uneda Biscuit

—no matter how far they journey, never become travel worn. As you open their moisture proof protecting package you always find them not only store fresh, but bakery fresh—clean, crisp and whole.

A package costs 5c.

(Never Sold in Bulk)

NATIONAL BISCUIT COMPANY

"Sure-Opener"

Will Open Any Tin or Glass Cans

See How It Works

THE "SURE-OPENER" will cut an opening from two to seven inches in diameter in fruit, vegetable, meat and fish cans; paint, oil, syrup and molasses cans; it will also seal and unseal any size "Mason" or other glass jars. IT WILL REMOVE THE TIGHTEST STICKING SCREW TOP FROM TIN, GLASS OR CHINA RECEPTACLES. No more trouble to get tops off gasoline or kerosene cans. No more broken glass or china jars. Saves time and temper. Always ready. The cutter is always sharp. The grip for sealing or unsealing glass or china jars never slips. Adjustable to any size. Is built like a jack—a scientific can opener and sealer.

Because of its jack-like construction it is so strong that it will cut a perfectly smooth opening in the toughest tin, and will remove the tightest sticking screw top. Actual length is eight inches and made of steel to give toughness and strength. Nothing to get out of order. So simple and positive in its action that a child can easily use it.

OUR OFFER—Send 5¢ cents for a year's subscription to Green's Fruit Grower and the "SURE-OPENER" will come back to you by return mail.

GREEN'S FRUIT GROWER

ROCHESTER, NEW YORK

I WILL PAY YOU FOR NAMES

I am of the hold-on kind—have published my ILLINOIS FARMER and Farmer's Call for twenty-six years and expect to publish it twenty-six years more. I have on my subscription list hundreds that have been there for more than twenty years, and thousands that have been there for more than ten years, and I want more of the hold-on kind. Hence this offer: The subscription price of my ILLINOIS FARMER and Farmer's Call, semi-monthly—much in it for the women and children—is 50 cents a year. Send me 20 cents and the names and addresses of fifteen good people and I'll send you my paper for two years; or send me 50 cents and the names and addresses of thirty good people and I'll send you my paper for ten years—that's big pay for the names.

Address, John M. Stahl, 20 Jackson Park Station, Chicago, Ill.



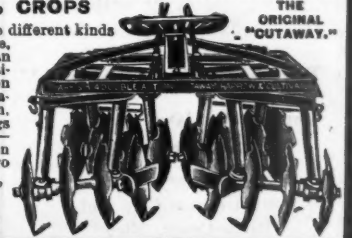
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Words fitly spoken are like apples of gold in baskets of silver.—Proverbs.

A Charming Personality.

By the Editor.

While dining in our hotel on Broadway, New York, we noticed at a nearby table a family party consisting of an aged man, his wife and son. The wife had a cheerful word for every one. The next morning my wife was seated in the hotel parlor crotcheting when this interesting grey haired lady entered the room. She at once addressed my wife as though she had known her. Said she, "Good morning. Are you making something nice?" referring to her crotcheting. This led to half an hour of pleasant conversation. What rays of sunshine such a cultured woman as this can shed over a home or even over a public house like this. But she is one of a thousand. Most women when entering a hotel or a hotel parlor or dining room act as though they must withhold all expressions of cordiality unless in the presence of some known person or persons. But what a dreary world this would be if every one acted in this way. Such conduct is not natural. It is constrained. It is not christian. It is not human. When two Americans meet in Europe after an absence of months from their native land they almost feel like embracing each other they are so glad to see an American, though a stranger. If we were crossing a desert alone, or a great forest, and should meet a kindly looking person, would we go by without a word of recognition? Far from it. We would at once begin to converse and would consider ourselves most fortunate thus to meet.

Sunflower Philosophy.

You don't give your conscience enough credit.

When you say a man refuses to listen to reason, it means that he fails to agree with you.

If you are contented, you are pretty well off without an auto and a mansion.

It has been our experience that when the weather is pleasant, and fishing agreeable, fish won't bite.

Our idea of an unusual man is one who doesn't have a lot of worthless junk he considers valuable.

If a woman has proper pride she will never forget her dignity, not even when running to a fire.

It usually takes a stronger hint to induce a visitor to go than was required to get him to come.

There may not be much money in raising chickens, but as an average proposition, it pays better than raising dogs.—Atchison "Globe."

A Happy Day

Follows a breakfast that is pleasing and healthful.

Post Toasties

Are pleasing and healthful, and bring smiles of satisfaction to the whole family.

"The Memory Lingers"

Popular Pkg. 10c.

Family size, 15c.

Postum Cereal Co., Ltd.
Battle Creek, Mich.

A Vegetarian Menu.

Written for Green's Fruit Grower by Elma Iona Locke.

Breakfast.—Fresh fruit. Flaked wheat, with cream and sugar. Baked apples. Hot muffins. Cereal coffee.

Dinner.—Sago soup. Mashed potatoes. Walnut roast. Creamed parsnips. Corn starch pudding and sauce. Nut and celery salad. Chocolate.

Tea.—Baking powder biscuits. Honey. Strawberry tapioca. Coconut layer cake. Cocoa.

With the baked apples serve whipped cream, flavored with any flavor preferred.

Delicious Muffins.—Sift two cups of flour with one teaspoon of baking powder. Mix two tablespoons of soft butter with two of sugar, add one well beaten egg, one cup of sweet milk, one-half teaspoon of salt, and the flour. Bake in muffin or gem pans in a quick oven.

Sago Soup.—Wash six tablespoons of sago, and put it on the fire in a quart of boiling water. Boil until tender, then add a cup of sweet cream, and seasoning to taste.

Walnut Roast.—Take cooked beans or peas, pass through a colander to remove the skins, mix with an equal quantity of finely chopped walnut meats, and season to taste. Line a buttered baking dish with one-half of this mixture, and spread on a dressing made as follows: Take four slices of zwieback, pour boiling water over them and cover, let stand a few minutes, then with a fork break it up, and pour over it one-half cup of cream, season with sage and salt to taste. Cover the dressing with the remainder of the nut mixture, pour over the top of all one-half cup of cream, and bake for one and one-half hours. Serve in slices, with cranberry sauce, and garnish with sprigs of green.

Creamed Parsnips.—Scrape and slice the parsnips, and boil until tender, in a small quantity of water. When done, add an equal amount of rich milk or cream, add a little thickening, with salt and celery salt to taste.

Corn Starch Pudding.—Make a blanc mange with corn starch, and divide it into four parts. Put one part (white) into the bottom of a mold and set it on ice to cool quickly; into one part while still hot, stir one heaping tablespoon of grated chocolate, and pour it into the same mold on top of the white, after that has set. Add the next part white, and color the last with the yolk of egg. When cold and firm turn out and cut in slices, and serve with whipped cream flavored with vanilla.

Nut and Celery Salad.—One pint of celery cut fine, one cup of chopped blanched walnuts, or boiled chestnuts, mix, and add a tablespoon each of minced orange rind and chopped parsley. Serve with salad dressing.

Baking Powder Cream Biscuits.—Sift together one and one-half cups of flour, one-half cup of corn starch, three teaspoons of baking powder, and one-half teaspoon of salt. Moisten with sweet cream as soft as can be handled. Roll out on a well floured board, cut in small biscuits, brush the tops with melted butter, and bake in a very hot oven.

Strawberry Tapioca.—Cook one cup of tapioca in a pint of water until clear, add sugar to taste, then pour, while hot, over a quart of hulled strawberries, and set away to cool. Serve with powdered sugar and cream.

Coconut Layer Cake.—Cream together two cups of sugar and one-half cup of butter, add one cup of sweet milk, three and one-half cups of flour, one teaspoon of baking powder, the whites of four eggs, one teaspoon of almond extract. Bake in three layers, and spread with a filling made of the whites of three eggs and one cup of powdered sugar, beaten stiff. Spread on when the cake is cool, and sprinkle well with shredded coconut, both between the layers and on top.

A banker's hour is 3:00 o'clock when he closes the shop and gathers up the shavings.

Raspberry Dainties.

Written for Green's Fruit Grower by Elma Iona Locke.

Raspberry Cream.—Mash a pint of fresh red raspberries and rub them through a sieve. Pour over them a pint of boiling hot cream, add sugar to taste, and let get cold. Fill sherbet glasses or custard cups two-thirds full, and heap whipped cream on top.

Raspberry Float.—Crush a pint of very ripe red raspberries and press them through a sieve to remove the seeds, add a cup of sugar, and beat in gradually the stiffly beaten whites of four eggs, beating until all is stiff.

Raspberry Trifle.—Put a deep layer of fine ripe berries in a glass dish, sprinkle with white sugar, cover with a layer of macaroons, and pour over all a rich cold custard. Just before serving, cover the top with the whites of three eggs whipped to a stiff froth with six tablespoons of sugar.

Raspberry Toast.—Mix a tablespoon of cornstarch with a cup of sugar, pour a cup of boiling water over it and cook and stir until clear. Take from the fire, and add one and one-half cups of berries, and pour over buttered toast. Serve hot.

Raspberries in Cream.—Whip one coffee cup of rich cream to a stiff froth, sweeten, and fold in gently two cups of raspberries. Heap in a glass dish, and serve very cold, with cake.

Raspberry Custard.—Heat slowly to boiling the juice from a quart of berries, or about a pint, with two ounces of sugar. When hot, add very slowly the yolks of three eggs well beaten, and stir until it thickens. Remove from the fire, and when cool, add a tablespoon of lemon juice and a gill of rich cream. Serve in custard glasses with a spoonful of whipped cream on top.

Raspberry Jelly with Coconut Cream.—Mash three pints of raspberries with one pint of sugar, let stand two hours, then strain through cheesecloth. Soak one box of gelatine in one cup of cold water until soft, then pour one pint of boiling water on it, and stir until dissolved. Add the berry juice and the juice of two lemons, strain, and pour into a mold open in the center; set on ice; when cold turn on to a dish, and fill the center with a coconut cream made as follows: Beat one pint of cream until thick, add half a pound of sugar, and a cup of finely grated coconut. Beat until very thick, and set on ice until wanted.

Babies of Quality.

Students of history will remember one obscure family in Massachusetts named Franklin. Their home was modest and the family so prolific that children in graduated sizes hung out of the windows and obstructed the doorways. There were seventeen of them, according to actual count, and the well-thumbed family Bible designated the fifteenth arrival as Benjamin. It was thought that this boy was the wind up of the family output, but two others followed, says the Palatka (Fla.) "News."

Benjamin was not an imposing figure as reported walking the streets of Philadelphia with a loaf of bread under his arm, eating as he passed along and gazing in wonderment at the city's sights. Yet but for Benjamin the people of the United States might still be vassals of the British crown.

In the good old days of large families parents thought that the family output was just getting good at about the tenth arrival. But Mrs. Baker insists that such families are a disgrace. She advises quality, not quantity, in the matter of offspring and the limiting of families to conventional size.

History and experience show that the family with one child often has a spoiled child and more trouble than families of seven or eight. In the days when our grandmothers reared tens and dozens and did it fairly well, weaving the wool, making all the garments, spinning and knitting and mending stockings and all attending sewing bees. While they may have been lacking in uplift, they produced results which were visible and tangible.

Food Value of Chestnuts.—The fruit of the chestnut tree is nearly as valuable as bread and more valuable than potatoes for dietetic purposes. Two pounds of chestnuts contain 118 grammes of starch and eight of fat, says "Harper's Weekly."

The annual production of chestnuts in France is over 3,000,000 quintals of 220 pounds. That means food for many workmen. But the hide tanners keep the product from the food market by buying it in large quantities for use in their business. Producers make more profit by selling their chestnuts for tanning than by disposing of them for food.

Your

home—every home—needs good music and fun to help make life worth living. The Victor supplies it as no other instrument can.

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Dolly Madison's First "Drawing-room."

When it became known that Mrs. Madison intended to hold a reception it was called a "drawing-room" by everybody, and the White House was known as the "Palace," or, less frequently, as the "Great House," for the names of things were still English, says "Harper's Magazine" for June. Many fervent prayers were offered up for fair weather for this night, for most of the guests would have far to go, and on a bad night a chariot might get stalled. Alas! it rained, and the carriages drew up at the White House door all spattered with mud, and the splendor of the liveried black coachmen and footmen was sadly marred. One or two chariots broke down in a mudhole near the White House gates, which was one of the worst places in Pennsylvania avenue, but the occupants were carried on by passing friends. The portico of the house had not yet been erected, but the guests alighted at the stone steps, and were under cover almost immediately. There a brilliant scene greeted them; fully two hundred people were present, and the house was glowing with lamps and large chandeliers having a thousand wax lights. The unique and symmetrical arrangement of the rooms and halls, the appropriateness of the new furniture, and the brilliant costumes of the guests, all combined to make a scene which an unprejudiced and discriminating observer must have admired and remembered.

Effect of Tea-Drinking.

There are certain complaints in which the use of tea is distinctly prejudicial. In flatulent dyspepsia or indigestion accompanied by the formation of large quantities of wind or gas, it is especially injurious, and its use often greatly retards the progress of cure, says "Medical Plain Talks." Many women ruin their digestive powers by taking large quantities of weak tea three or four times a day. The excessive consumption of tea especially when combined with a poor diet, leads to a condition of nervousness and irritability which is quite pitiable. This habit is especially prevalent among dressmakers and others whose occupations are of a sedentary nature. In the out-patient department of many hospitals the effects of excessive tea drinking are almost as noticeable as the result of intemperance as regards alcohol, and that is saying a great deal. It is not an uncommon practice with enthusiastic students to resist the claims of the system for repose and keep themselves awake at night by the generous use of green tea. The object is attained, but at the price of destruction of health and vigor, both of body and mind which is too often the penalty.

The latest from Dr. Woods Hutchinson is in regard to the foolishness of face foods and complexion treatments in general. He says that the face will no more absorb such things than a rubber coat would, and would be as much benefited by the application. The condition of the lower face depends upon the digestion; of the middle face upon the lungs, and the upper third is affected by the condition of the mind. Stop buying skin foods and increase the butcher's bill, he says. Eat good food, breathe fresh air, keep the body clean and the conscience clear, and the complexion will take care of itself.



Photograph of Washington county (Ohio) girl weighing her baby nephew. Miss Mason writes that they have long been subscribers of Green's Fruit Grower and are well pleased with it.

The "Humble Duties" of a Wife.

"Here's the whole thing in a nutshell," said Brown to me. "I am now 28 years old, have my own business, have brought it to such a state that I have decided to take a partner," says a writer in the "American Magazine."

"Take one?" asked I.

"There's the rub," he gave back. "My partner must be such an all round knowing one that I'm afraid I'll have hard work to fill the position."

"My partner must be able to make laws and to enforce them, must be able to carry out complicated chemical work, must be a skilled mechanic, must know something of economics, must be able to buy wares of all kinds with due consideration of my finances, must be able to do tailoring, of a kind, if necessary."

"Hold on, Brown," said I. "Are you dippy, as the vulgarians say?"

"No," replied he. "I want a wife. Look around among your friends and see if any one man among them could do all that a good housewife should be able to do. She must make just laws for the family and enforce them."

"She must understand the complicated processes of cooking. Making, mending, washing, ironing and otherwise caring for the clothing of a family requires mechanical skill. Bringing up a child properly requires far more knowledge and wisdom than selling dry goods of standard makes and prices year after year."

"Where is more science and skill required than in the sick room? And if the wife does not know how to do all of these things how can she direct the work of her paid help, especially if the help knows less than she does?"

Gooseberry Pie.—The very name has a charm about it, says "Table Talk." Take one pound of gooseberries, wash and prepare them as for stewing. Put them into a deep pie plate with four tablespoonfuls of sugar strewn among them, but have no sugar on the top of the berries so that it could touch the pastry. Add one tablespoonful of cold water. Cover with a good rough puff paste. Bake in a hot oven for about forty-five minutes, and do not allow the pastry to get more than a pale golden color. Sprinkle sugar over the top before serving.

Wanted Them Permanently.

A young gentleman of the colored persuasion had promised his girl a pair of long white gloves for a birthday gift. Entering a large department store, he at last found the counter where these goods were displayed, and, approaching rather hesitatingly, remarked, "Ah want a pair ob gloves."

"How long do you want them?" inquired the business-like clerk.

"Ah doesn't want fo' to rent 'em; ah wants fo' to buy 'em," replied the other, indignantly.

"Open wide the windows,
Let a little sunshine in."

Table Etiquette for the Young.

Always be prompt in attendance at meals particularly when you are the guest of another.

Never seat yourself at table until your host or hostess gives the signal; and never, gentlemen, until all the ladies present are seated.

Always sit quiet in your chair, neither too near the edge of the table, nor too far from it.

Never lean upon the table.

Never touch anything upon the table unless necessary, either the food or the table furnishings.

Never take more than one dish of soup.

Never crumble bread into your soup, nor into your cup.

Never press food upon a guest when he has refused.

Never be disturbed by any accident that may occur, if possible let it pass without the slightest notice.

Never, should you be so unfortunate as to meet with an accident, make known your regret at the time other than by your expression, but take the earliest opportunity of apologizing to your host or hostess in private.

Always, as host or hostess, serve all the ladies present, including those of your own family, before helping the gentlemen.

Always, gentlemen, serve any lady at your side, whether you have been presented to her or not.

Never make a noise in sipping your soup.

Never cool your soup by blowing upon your spoon.

Always take soup from the nearest edge of the plate by moving the spoon from you.

Never take soup from the point of a spoon.

For the Preserving Season.

Be sure to have your cans, jars, and bottles, with their covers, rubbers, corks and sealing wax, with a pound or two of paraffin wax, in readiness for the fruit season, which is now but a little while distant. Have the metal or glass top fitted to its own jar, have new rubber rings, and put jar, ring and top together, ready for use. Do not use cans showing the least bit of rust, or glass jars or bottles with even the slightest sign of crack or "silvering off." Have plenty of pint jars, even for a large family, for a small quantity "comes handy" sometimes where a larger quantity would spoil before being used. See that the jar fastenings are strong and simple.

If the tops of jars have rusty places inside dip them in a supply of melted paraffin, slightly coating them, put away in a clean place, or placed loosely on the jar, and they can be used again.

A supply of bottles should be on hand for the catsup, small pickles, fruit juices, or scraps of "things" left over when filling the regular cans. Corks can be bought for them at the grocers, and when filled, the tops of the corks should be coated by dipping in paraffin wax, or in sealing wax. If no corks, cut out several rounds of muslin large enough to reach down on the neck of the bottle or jar, and tie them securely with stout twine below the round at the top of the neck. Dip the bottle as deeply as the muslin extends into the sealing wax or paraffin. Label each jar or bottle with the name of the contents before putting away.

Knew Wife and Dog.

A man's voice, husky with anxiety, called up police headquarters the other night at about 2:30 A. M. It was a distraught husband begging the police to help him find his wife, who had been missing since 8 o'clock in the evening, says "Puck."

"What's her description?" asked the official at the 'phone. Her height? Weight?

"Er—er—about average, I guess," stammered the husband.

"Color of eyes?"

A confused burring sound came back over the wire.

"Blue or brown?" prompted the official.

"I—I don't know!"

"How was she dressed?"

"I guess she wore her coat and hat—she took the dog with her."

"What kind of a dog?"

"Brindle bull terrier, weight 14½ pounds, four dark blotches on his body, shadowing from grey into white; a round blackish spot over the left eye; white stub of a tail, three white legs, and the right front leg nicely brindled all but the toes; a small nick in the left ear, gold filling in his upper right molar, a silver link collar with—"

"That'll do!" gasped the official. "We'll find the dog!"

How the henpecked man does crow when he is away from home.

A Home vs. a Touring Car.

"To a man in a neighboring city three years ago I loaned \$5000, taking a mortgage on his property as security. I learned that he applied \$3500 to the purchase of a touring car. . . . He has been arrested and fined three times for excessive speed; his license, supplies, repairs, ferriages, road meals, etc., in three years have easily consumed the difference between the loan received and the purchase price. He has paid me \$750 in interest, and now offers the car in vain at \$500, and must renew the mortgage. He has consumed \$5000 in enjoyment, so-called. On my side the full value of my principal remains, plus \$750 interest, plus compounding and further accretion. I learn that the borrower is quite dejected, but I am feeling fairly well."

No one ought to deny himself legitimate pleasures that he can afford to pay for. It is his right to obtain from life all the pleasure that he can, provided that no duties are neglected in its pursuit. But the man who mortgages his nest-egg for this purpose is not one to be commended. The incident reported is a typical case and ought to serve as a warning to those who are hovering on the verge of this unwise undertaking.

Marvelous Griffith.

"I am a master of mathematics," said he. "Arithmetic is the science of numbers and the foundation of every business in the world. It proves that the compound interest on 1 cent at 6 per cent, from the birth of Christ to the present day all in silver dollars, will cover the whole surface of a clear, smooth and level floor as large as this earth being placed flat and against each other, and the silver dollars will reach so far up in the air that it would require a man over twenty trillion years to reach this earth coming from that distance at the rate of 600 miles a second."

"Figures prove that one gallon of water consists of 61,440 drops; hence it would require as many standpipes 25,000 miles in circumference and 92,400,000 miles deep to hold one virgintrillion drops. One virgintrillion drops of water would make a body of water as large as the Pacific ocean, eighty million square miles, and this body of water would have to be over forty billion miles deep—"

Julia Ward Howe, on her 91st birthday, a few days ago, issued the following advice to the women of this country: "Live in your own time, don't lag behind, but be up and doing. How differently I might have anticipated the future could I have realized the great changes in the opportunities and environment of women! It has become a necessity to be able to speak in public and become active in affairs outside the home. There is great power in association. The message I would give to my children, grandchildren and great-grandchildren is 'Don't stay where you are, go on.'"

Prevents Dandruff.—Lemon juice prevents dandruff. Mix one part of juice and three of water and rub into the scalp. Loss of hair can be successfully treated in the same way.

Fadeless Brown
Think of the satisfaction of having a brown cotton dress that will not fade!

Simpson-Eddystone Fast Hazel Brown Prints
are the fastest and most beautiful shade of brown printed on the highest quality of cloth. The designs are new, artistic, and stylish; and the fast color grows brighter with washing.

If your dealer hasn't Simpson-Eddystone Prints write us his name. We'll help him supply you.

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placed anywhere, attracts and kills all flies. Neat, clean, ornamental, convenient, cheap. Lasts all season. Made of metal, cannot spill or tip over, will not soil or injure anything. Guaranteed effective. Of all dealers or send \$2.00 for 20 cents.

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If you are, one of our Columbia sealer and cover trunks (for Mason Fruit Jars) will make the work easy for you. It keeps the fruit from spoiling. Will fit any jar. Only 50c. postpaid. Send for one today; you need it. Agents wanted for exclusive territory. A. D. GOODMAN CO., General Agents, 714 E. 19th Street, Kansas City, Mo.

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Cleanses and beautifies the hair. Promotes a luxuriant growth. Never fails to restore the hair to its youthful color. Cures scalp diseases & hair falling. 50c. and \$1.00 at Druggists.

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JAR SEALER AND WRENCH

The finger points at the sealer that presses down the rim good and hard on the rubber. A trial is all we ask. Unsolicited testimonials—that fruit canned old way cut up three times, and after treated with this device remained quiet. 15c. prepaid. J. N. HIERONYMUS, FAIRBURY, ILLS.

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12 BIRTHDAY POST CARDS 15c. Embossed Flowers, Gold or Silver Background. Assorted. High Grade. MILDRED DOUBLEDAY COMPANY, ATOL, MASS.

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Terrific Air Suction. Rushing, whirling, sucking air cleans, carpets, rugs, matings on floor, without sweeping or dusting. No motors, no electricity. Constant suction. New Home Vacuum Cleaner. New principle. One person operates. Child or weak woman can handle easily. Weighs nine pounds. Simple—powerful—effective. It's the constant suction that does it—terrific, irresistible, sure. Sucking, drawing—gathering up into itself dirt—dust—grit—germs and grime from the very warp and fibre of carpets, rugs, matings. Does same kind of work as high priced machines. Prices so low all may enjoy its benefits. Unlike anything you've seen or heard of. Makes carpets look like new. Better than if taken up and beaten. Raises no dust, so no dusting required. Does what days of sweeping and pounding could never do. Mrs. Jane Shully, Neb., writes: "You don't claim half enough. I wouldn't part with my cleaner for any price, if I couldn't get another. My ten year old girl operates mine easily and enjoys it."

SAVES MONEY. STRENGTH, HEALTH AND TIME. YOU NEED IT.

MAKES DUSTLESS HOMES

You Can Abandon Brooms, Brushes and Dust Cloths. They don't clean your rugs and carpets. Brooms and sweepers all the air with clouds of unhealthy disease-laden dust and germs and remove only surface dirt. New Home Vacuum Cleaner sucks up not only surface dirt, but all dirt, dust, grit and germs from in and beneath. Disturbance and upheaval of housecleaning unnecessary. Stop short! Put drudgery behind you—leisure and health before. In New Home Vacuum Cleaner find your salvation from household slavery. Adopt the new—easy—modern—sanitary—scientific way of cleaning.

Price \$8.50. Sent Anywhere. Not Sold in Stores.

Think of it! Not \$100, \$50, or even \$25—only \$8.50. Think what a small price for such a wonderful invention. What's \$8.50 compared to a neat clean home; when you can banish forever the drudgery of sweeping—cleaning—dusting when there will be no more carpets and rugs to take up and beat. We guarantee New Home Vacuum Cleaner to be just as represented or your money back. Comes set up ready for use. You will be delighted—enraptured with it. Mrs. Henry Deller, R. I., "I must thank you for telling me of your wonderful cleaner. What a joy and it is to women. I have not felt so rested in years. Work now easy. Plenty of spare time. Don't see how you can sell it so cheap." Don't wait; don't hesitate. Order now. You risk nothing. To try a New Home Cleaner means to want it—then to keep it. Every cleaner tested before shipping—guaranteed as represented or money refunded. Send for a cleaner now.

Agents are Making Big Profits. Women excited—eager to buy as soon as they see how beautifully it works. No trouble to make sales—no experience required. Just demonstrate—that's all. Shown in three minutes—sold in five. C. E. Goff, Mo., says: "Sold five cleaners last Saturday my first attempt. W. H. Morgan, Pa., "Sold 45 cleaners in 25 hours." It's immense. So cheap. Yet so good, all buy. YOU make money. YOU get these big profits. Write a card now. Get our liberal proposition.

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NEED NOT
INTERFERE WITH THE
ENJOYMENT OF YOUR OUT
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WE GUARANTEE IT TO KEEP
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QUALITY AND ARE
TRUE TO NAME. ASK
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thing for an egg or
cream beater ever on
the market, and it is
absolutely new and very
valuable for the cook
room. It will beat eggs
or cream as well with
one hand as any other
contrivance will beat
them with two. We
have arranged with the
manufacturers to give
us a special price on
these and will send one
absolutely free to any
subscriber, new or old,
who pays us 50c for
Green's Fruit Grower a
year in advance. If
when you get it and try
it you are not perfectly
satisfied we will send
your money back, with
no expense to you. A
single trial will con-
vince you that it is the
handiest thing you ever
used. — Editor House-
hold Department,
Green's Fruit Grower.

Address,
**GREEN'S FRUIT
GROWER,
Rochester, New York.**

Points for the Poultry Lover.

Wheat is a fine morning feed.
Boil some of the small potatoes, mash
them and feed them to the hens. They
make eggs fast.
Eggs of uniform size will sell more
readily than those that include both
large and small ones.
Hens are like folks, about all want-
ing the highest places. They will quar-
rel over them, sure; but put them all
on a level and you will fix them all
right.

Various Poultry Foods.—The gluten
products are residues of corn left in
the manufacture of glucose. Gluten
meals consist mainly of hard or flinty
portions after the bran, the germ or
chit of the corn kernel and part of the
starch have been removed, says "Rural
Life."

Malt sprouts are the dried shoots
from germinated barley. Brewers'
grains are the barley grains from which
the starch has been removed by growth
and fermentation. In fresh state they
contain too much water to justify pay-
ing a very large price. Dried they fur-
nish about as much protein as the malt
sprouts.

Hominy feed or hominy chops con-
sists of the hull, germ and part of the
starch of corn grains, and contains less
starch, about the same amount of pro-
tein, and more fibre and fat than corn-
meal.

In 100 pounds of bran, six pounds of
ash are found. The ash material of
wheat is almost the same as of corn.

Timely Hints and Suggestions.—Never
depend upon luck. Know your business.
Keep strict accounts and records and
study them. Have application, patience,
persistence, and be a hustler.

Do not forget that the careful ob-
servance of all the little details in pou-
ltry raising is what brings in the end
the big returns. Every neglect is a
cog removed from the perfect wheel of
success in poultry raising.

Breeding stock should be mated at
least two weeks before saving the eggs
for hatching purposes.

Overcrowding causes fowls to sweat
at night, and this soon rots the feathers
at the root. This is one reason why
so many fowls shed feathers outside of
the regular molting season.

Be neat in your hen housekeeping.
Have a big box handy to the houses and
keep the manure good and dry. Wet
hen manure is spoiled for fertilizing
purposes. Dry, there is none better on
the farm.

Doctor ailing hens with the sharp
edge of an ax. You can effect a cure
that way a great deal quicker than any
other and it will pay better than to
dope them, especially when you don't
know what ails them.

It is all right to fight rats and all the
rest of the enemies that come to the
lover of poultry, but don't forget that
the greatest enemy of all, and the one
that is the hardest to lick out is neglect
and carelessness. We are apt to fight
that last of all, when the truth is we
ought to begin there first.—"Farm and
Fireside."

The Prince, Now King George.

Coaling was in progress when he
came on board, and the captain, who
was busy, turned him over to a young
officer, who showed him all over the
ship. The officer's face was begrimed
with coal dust and his uniform showed
that he had been called from superin-
tending the trimming of the bunkers to
act as host to the visitor. The Ameri-
can questioned him about the Prince.
"Isn't he to be seen to-day?" he
asked.
"I'm afraid his features won't be vis-
ible," was the reply.
"Oh, I suppose you keep him wrapt
up in cotton wool when a job like this
is on," said the American, but the young
officer only laughed good-naturedly.
Finally, when he had been shown
everything there was to see, the Ameri-
can went to say good-bye to the captain,
who asked him if he had seen all he
wanted.

"Well, the fact is, I haven't seen the
man I wanted most to see, the Prince."
"The Prince!" said the captain.
"Why, man, you have been with him for
the last two hours."
"Was that the Prince?" the Ameri-
can shouted. "Well, captain, you just
give him my compliments and tell him
that I have gone ashore to kick my-
self."

"What a man wants in his youth, if
he desires it enough, that shall he have
in his old age, and plenty of it," says
Goethe.

That is not only a promise, but a
threat.

For one's choices are also one's re-
fusals.
"You shall have this" means also,
"You shall lack that."



How to be Healthy.

Salt your food sufficiently, because
salt is an aid to digestion, but not
more than needed to suit the taste.

Eat less rapidly and chew your food
more. The stomach wants only well
chewed food. The teeth were made
for that special purpose. If they are
poor or missing, seek the dentist's aid.

Avoid violent exercise and severe
mental exertion just after meals, but a
moderate exercise, as walking, will aid
digestion.

Wash your hands with soap and water
before each meal, even if they do not
appear unclean.

Brush your teeth inside and outside
at least once a day, and rinse your
mouth after each meal.

When your stomach is out of order,
give it a rest by fasting half a day or
by taking only a little fluid food.

Remember that the wholesomest
meats are beef, mutton and poultry and
that beef and mutton are most easily
digested and wholesome when broiled,
roasted or stewed, not fried.

Remember that pure water is the
most natural and wholesome beverage.
A glass of pure water every morning
before breakfast will go far toward
preventing sickness and extending life
toward the century mark.



A PICNIC IN THE COUNTRY.

Dr. William Kelly Simpson, who
teaches the cure of nose, throat and ear
maladies in the College of Physicians
and Surgeons, declared that not one
person in a thousand knows how to
perform properly such a commonplace
act as blowing the nose. He said: "It
is very dangerous to pinch one's nose
hard and blow both nostrils at once.
Particles of infection are liable to be
blown up the tube and cause earache.
Always blow one nostril at a time.
When children have earache parents
have also a horrible way of putting
household remedies—sweet oil, para-
goric and the like—in their children's
ears. The surface membranes inside
the ear aren't able to absorb them and
they are likely to collect inside and
make the ear ache much worse."

"As for common, ordinary colds, they
are caused mostly by draughts. There
are three turbanated bones, one right
above another, in the upper recesses of
the ear. They are supplied with an un-
usually large amount of mucous mem-
brane. This membrane can expand and
contract. When we get into a draft
the membrane protects the lungs by
swelling. Thus the nose becomes closed.
If you want to avoid colds douche out
the nose every morning. This cleanses
the membrane and keeps the microbes
from infecting it."

Hereditary Strength.

There prevails a rather general im-
pression, says Sandow in the "Strand,"
that, in order to become strong, one
must be born strong. I can put forward
no greater proof of the error of this
idea than my own case. As a child I
was pale, frail, delicate, even weakly;
I inherited no abundance of health or
extraordinary physique, for my parents
were not exceptional in these respects,
nor, so far as I know, were any of my
ancestors. That I have acquired health
and strength is due entirely to the
fact that I have exercised regularly and
systematically, not spasmodically and
erratically. I state these facts because,
in the first place, it is most harmful
that so detrimental a delusion—that one
must be born strong to be strong—
should have continuance; and in the
second place, to contradict statements
which have been made again and again,
that not only was I phenomenally strong
as a child, but that I came of a muscu-
lar stock.

By the Shape of Your Nose.

There is a tolerably close racial
parallel between high nosed and high
minded, says Dr. Wood Hutchinson, in
"Success Magazine." The nose is not
only our most human, but in a broad
sense is our most intellectual feature.
Growth of nose and shrinkage of jaw
have been the two great correlates
which have accompanied human prog-
ress. The moment, however, that we
endeavor to go beyond these broad
and loose generalizations we find our-
selves in trouble. This, from the fact
patent to every one who has kept his
eyes open, that we find noses of prac-
tically all shapes, from the plebeian
pug to the aristocratic aquiline, in in-
dividuals of the same race, and even
in members of the same family, al-
though the long and straight, or con-
vex, noses would be far more nume-
rous in the higher races and the abler
families. It is comparatively seldom
that a great man has a small nose, or
even a short one, and instead of apply-
ing such terms as "proboscis," "beak,"
"carrot" and "beet" to a large, long ag-
gressive nose, it should be regarded as
a mark of breeding and as prima facie
evidence of good blood and possible
capacity.

By the deoxidizing action of the liv-
ing cell the pigments are again reduced
to chromogens and the oxygen thus lib-
erated attacks the substances derived
from the complex foodstuffs and con-
verts them into carbon dioxide and
water, the final products of normal
respiration.

The process and its various stages
are identical in plants and in animals.

The similarity of the vegetable chromo-
gens to the substances which serve as
reservoirs and vehicles of oxygen in
the blood of animals appears more
clearly if we compare the former not
with the substances of higher animals
but with those of the blood of insects
and crustaceans, which is colorless, ex-
cept when oxidized. In general plants
more closely resemble the lower than
the higher animals. Hence Palladin
calls the cell sap the blood of plants.

Rules of Sleep.

Those who think most, who do most
brain work, require most sleep, and
time "saved" from necessary sleep is
infallibly destructive to mind, body and
estate. Give yourself, your children,
your servants, give all that are under
you, the fullest amount of sleep they
will take by compelling them to go to
bed at some regular early hour and to
rise in the morning the moment they
awake, and within a fortnight nature,
with almost the regularity of the rising
sun, will loosen the bonds of sleep
the moment enough repose has been
secured for the wants of the system.

That is the only safe and sufficient
rule, and as to the question of how
much sleep any one requires each must
be a rule for himself—great nature will
never fail to write it out to the ob-
server under the regulations just given.
—London "Globe."

A Dislocated Jaw.

A very distressing little accident is
the dislocation of the lower jaw. I once
had a patient who rode a long distance
with his mouth wide open, suffering
a great deal of inconvenience and no
little pain, when one of his friends
could have relieved him in an instant.

Wrap both your thumbs in several
layers of cloth, stand behind the patient,
who should be seated, and place your
thumbs thus protected on his back
teeth, grasp his jaws on either side
with your fingers, press down with your
thumbs, up with your fingers, at the
same time drawing the jaw forward.
The bones will go back with a snap
and the victim will spasmodically close
his mouth hard enough to draw blood
unless your thumbs are well shielded.
—"Outing."

"The road to resolution lies by
doubt."—Quarles.

MARKETING EARLY GRAPES.

Two important factors enter into the proper handling of any class of fruit—the condition of the fruit when picked and the package. Carelessness and indifference in the matter of either or both of these factors frequently result in loss to the grower when he comes to market the fruit. We will consider these factors in regard to the handling of early grapes, says G. H. Carpenter, Fruitland, Ontario, in "Canadian Horticulturist."



In the Vineyard.

Unlike many other classes of fruit, grapes will not ripen off the vines. The fruit must be allowed to fully mature and become properly colored before being gathered. The importance of the first factor then becomes apparent. Picking the crop is equally important; when the fruit is being sold for commercial purposes it is picked in the standard six-quart basket, and seldom re-packed. As stated, it must be picked when mature; consequently, it will be seen that the grape is a more perishable product than most other fruits which can be picked before fully ripened when required to ship long distances. Picking should be carefully supervised by some experienced person who should instruct his help in the matter of removing the branches from the vines, and placing them in the baskets in such a way as to make a neat and attractive looking package.

When a high-class trade is being supplied smaller and fancier packages are employed and the fruit is generally re-packed in a packing house in order to insure a high-class article. In any case, when a superior and inviting package is desired, it is safer to re-pack the fruit, being careful in the operation to remove all green and broken berries. This involves extra work but, in most instances, it is work well expended.

Selling Individually.

Many men can grow fine crops but few can market their crops to best advantage. Those growers who are situated near a good market have an advantage over growers not so favorably situated, as they can place their fruit directly into the hands of the consumer and thus secure all the profits to be realized from the sale of their fruit. The majority of growers, however, must sell through some one else. With them it is a question of reducing the number of middlemen as much as possible, and of securing the right parties in each instance.

Selling on Commission.

Selling through commission houses is, at best, an unsatisfactory system of disposing of fruit. These men, as a class, fill an important place and many growers have to resort to this means of selling their fruit. There are individuals in this class, however, who are in the business because they feel they are dealing with parties who are woefully susceptible to the "skinning" process. In adopting this system, therefore, it is well to keep closely in touch with market conditions, and have your fruit reach the market in the most direct way possible.

Selling to Local Buyers.

The local buyer offers another means of disposing of fruit which is but little more satisfactory in many ways than the former system. These systems suggest the need of grading this class of fruit. When the fruit is bought and sold indiscriminately the price often is knocked down because of the presence in a consignment of the inferior product of some careless grower. The whole consignment will sell for the price of the inferior goods and the producer of a superior article will be the loser. He will receive no compensation for the extra care employed in the preparation of his fruit for market.

No Voice in Setting Prices.

An unsatisfactory feature about both of these systems is the fact that the grower has practically no voice in the setting of the price on his fruit. We would think it mighty strange if a grocer were to ask us what we would give him for a pound of tea or a barrel of sugar, or a butcher how much we would pay for a quarter of beef. Such a practice is, indeed, rare. And yet producers of fruit are so accustomed to having the prices set on their goods, that it becomes a matter of habit for them to ask a purchaser what he will give for this lot of grapes or that consignment of peaches. Is there any good reason why the grower should not set the price on his goods the same as is done in other lines of business? Market gardeners and fruit growers who have access to markets are able to set their own prices largely and there seems to me no good reason why all growers should not follow the same practice.

The Co-Operative System.

Another system and probably the most satisfactory one for all concerned is disposing of fruit through co-operative fruit associations. When a number of growers co-operate to sell their fruit, a more uniform product is put up, a better market usually is secured and more remunerative prices are obtained than when growers individually and possibly cut one another as frequently is done. In these associations, a manager is employed whose duty it is to see that all fruit comes into the central station in good condition, and is sent out properly packed and marked according to the standard set by the association. This insures a uniformity of product. Quotations are sent out through the country and the fruit is placed through agents acting for the association. These agents are conversant with market conditions and, know the quality of the fruit they are handling.

About Leasing Farms.

Reply by C. A. Green: There is no stipulated manner of leasing farms. Every one who leases his farm must make his own bargain in his own way. Some farms are leased on halves and are supplied with such tools as are on the farm. But sometimes the man who works the farm furnishes all the tools and all the seed or sometimes half the seed, but you see there is no legal stipulation as to what any party should supply, but whatever contract he has signed he must follow. Whenever you make a contract be careful to look over that contract with great care, and if possible get your lawyer to look it over before you sign it. One farm may be rich in fertility and another poor. One farm may need draining while another is naturally dry. One farm may have good buildings, another poor. One farm may be poorly located and another desirably located.

Therefore in renting a farm on shares all these things must be taken into account. You can afford to furnish more tools, more seed, etc., on a valuable farm than you can on a poor farm and the contract should be made accordingly. I give these details for the reason that you seem to think that there is some specific law for leasing farms on shares which is not the case. Whether you are to pay all the taxes, half the taxes or none of the taxes depends upon your contract and nothing else. If you have not agreed to pay the taxes it is my opinion that you cannot be made to pay them. But your tax on personal property you should pay. A contract carefully made out saves much controversy and many lawsuits. The points I make are on general law and not the specific laws of Ohio on which I am not informed.

Work in the gypsy and browntail moth infested region of Massachusetts is under way. Over four thousand miles are now more or less in the area and include about half of the state. Among the new towns in which moths have been discovered this year are Sterling, Boylston, Blackstone, Auburn and Hubbardston. The moth superintendents of the various towns are now under supervision of the state forestry department. In all, about two hundred horse power sprayers and three hundred hand outfits are ready for use. For spraying moths, a solution of one pound arsenate of lead in ten gallons of water is the most generally used.

A hemlock tree, cut down near Bolton, Vt., measured forty-nine inches across the stump. There were 2533 feet of lumber in the tree, which was estimated to be 475 years old.

"With knowledge doubt increases."—Goethe.

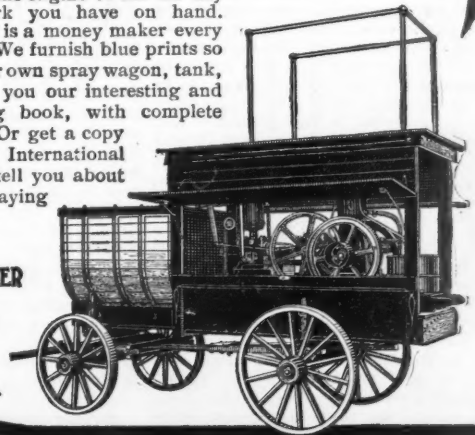
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In the following combinations Green's Fruit Grower is clubbed with various horticultural, agricultural and literary magazines together with the price of each and a special clubbing offer for the combination. Send us the special clubbing price and we will have the various periodicals sent to your address.

Regular Price.	Combination	Regular Price.	Combination
Green's Fruit Grower	\$.50	Green's Fruit Grower	\$.50
American Poultry Advocate	1.00	Munsey's Magazine	1.00
Gardeners' Chronicle	1.00	Suburban Life	3.00
Farm and Home50	Ranch and Range	1.00
Green's Fruit Grower50	Green's Fruit Grower50
Farm Journal, 2 yrs.25	The Argosy	1.00
Farm News25	The All-Story	1.00
Farmer's Call40	Green's Fruit Grower50
American Stock Farm50	Railroad Man's Magazine	1.00
Green's Fruit Grower50	American Stock Farm50
Ranch and Range	1.00	Green's Fruit Grower50
American Farmer40	Suburban Life	3.00
Green's Fruit Grower50	Success Magazine	1.00
The Western Fruit-Grower	1.00	Green's Fruit Grower50
The Ohio Farmer75	Farmers' Review	1.00
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The Commoner (weekly)	1.00	Green's Fruit Grower50
Human Life	1.00	Rural New Yorker	1.00
Green's Fruit Grower50	Country Gentleman	1.50
Suburban Life	3.00	American Farmer40
Success Magazine	1.00	Farm News25
Green's Fruit Grower50	Green's Fruit Grower50
Harper's Bazar	1.00	Farmer's Voice50
Success Magazine	1.00	Reliable Poultry Journal50
Green's Fruit Grower50	Up-to-Date Farming50
Farm and Home50	American Stock Farm50
The Western Fruit-Grower	1.00	Farm Journal, 2 yrs.25
American Farm World50	Farm News25
Green's Fruit Grower50	Successful Farming50
Farmer's Voice (semi-mo.)50	Farmer's Call40
Irrigation Age	1.00	American Farmer40
Ranch and Range	1.00	Green's Fruit Grower50
Farm Journal, 2 yrs.25	Pearson's Magazine	1.50
Green's Fruit Grower50	Harper's Bazar	1.00
Suburban Life	3.00	Green's Fruit Grower50
Irrigation Age	1.00	Ainslee's Magazine	1.80
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GREEN'S FRUIT GROWER, ROCHESTER, N. Y.



Letters From the People.

"Prudent questioning is the half of knowledge."—Proverb.

Green's Fruit Grower: I have been very busy this spring and I never saw everything look so well and full of bloom. Currants, gooseberries set with fruit, and cherries, plums, all froze, the grape vines are about ruined. Quite a loss to me, three-fourths acre of grapes were in fine shape for a large crop.—Dr. James Rigg, Ill.

Green's Fruit Grower: In a very late freeze my black raspberries, also grapes, were frozen after being all in leaf. The raspberries seem dead down to root and part of the grapes. How would you advise me to prune?—Ed. Bohn, Iowa.

C. A. Green's reply: If you are sure the canes of the raspberries are dead cut them back to live wood even if you have to cut them close to the ground. But possibly the canes may not be dead and if not you should not remove them at present. The grape buds will start again on the vines, therefore do not prune the vines at all.

Child for Adoption.

Chas. A. Green: I am much interested in Green's Fruit Grower and especially in your "Walks and Talks." The short article, "A Child of Adoption," in the May issue, especially appealed to me. My own case, hit fairly. For years I have had a desire to adopt a girl baby. My own family are married and away and my wife and I occupy a big home all alone. If my wife was as interested in the matter as I am, we should have tried it out long ago, still I think she would not strenuously object. I write you to show my appreciation of your article and should you have the knowledge given you of some desirable waif seeking a home, please remember me.—Chas. Q. Eldredge, Old Mystic, Conn.

Going Fishing.

Mr. Green, Dear Sir: Could you or any of your subscribers tell me where I could procure fish to start a private fish pond? We have four boys, all wild to go fishing, and there is no place for them to fish except the river which is a mile away, and the boys all too young to go alone. Any information gladly received as I wish to keep my boys on the farm if possible. We have a splendid location for a pond.—Mrs. T. E. Shearer, Pa.



C. A. Green's reply: I am very glad to get such letters as this indicating that parents realize the necessity of providing means of amusing boys on the farm and making life enjoyable for them. I am sure that a fish pond on the farm will add much to the boys' pleasure and will tend to make them contented with farm life. It would be an object of beauty in summer. In winter the pond would furnish skating for the boys and also give a supply of ice for the ice house. It is possible that you could sell ice from this pond to your neighbors for their ice houses. I regret to say that I cannot state where you can get small fish for stocking the fish pond. Almost every state has a fish hatchery where small fish of various kinds can be secured for a small price. New York state has such a fish farm at Caledonia, N. Y. Write your state experiment station at State College, P. O., Pa. Ask them where you can buy fish for stocking your pond.

Grape Growing.

Green's Fruit Grower: I want to plant a graperies this fall of about one and one-half to two acres and I wish you to advise me. I have just bought a place here and am not well posted as to the adaptability of the soil to grapes. The soil is gravelly and where I want to plant is a side hill that lies to the west, almost squarely, and there

is no protection from northwest winds. I find this section is given to dairying and the people know very little about raising fruit excepting apples. Some berries are grown but not many. I also expect to plant red and black raspberries.—W. A. Morris, N. Y.

C. A. Green's reply: The gravelly soil and the hill side are favorable for grape growing. Whether grapes succeed in your section you can learn from your neighbors' experience. In some parts of this state away from large lakes the summer season is not long enough to ripen grapes like the Concord and Niagara perfectly. If so you should plant early varieties. If grape growing is an experiment in your locality plant a few and test the question.

C. A. Green: I have an orchard about thirty-five years old which has been in sod eleven years and I expect to plow it the fore part of June. Some of the neighbors say it will make the apples drop off, plowing it so late. Is there any truth in this statement?—Francis A. Hunter, N. Y.

C. A. Green's reply: I know of no reason why the plowing of your orchard in June should cause the fruit to fall, yet if your neighbors have learned that this is possible I should plow earlier or later. Remember that when an orchard has stood eleven years without plowing the roots come very close to the surface, and that ordinary deep plowing would destroy a vast amount of apple tree roots, therefore plow as shallow as possible, trying not to plow deeper than four inches. If you plowed six or eight inches deep it might cause the apples to drop. Such orchards as yours are generally plowed late in the fall or early in the spring.

Snyder Blackberry.—Please give me a full description of the Snyder blackberry. What is the color of the cane and the shape of the leaf? Do they sucker as much as some varieties? About how many berries to cluster? I have a few plants and do not know what they are. They beat all in yield. If I can find out what they are I would like to plant six hundred plants this fall. I have counted as high as eighteen in one cluster.—E. H. Devilbiss, Md.

C. A. Green's reply: Snyder blackberry is jet black but of moderate size. The size of the fruit is as small as any of the cultivated varieties. It is very productive being unexcelled in this respect. It is the hardest of all cultivated blackberries. It is not a long berry. If the berries on your plants are long they are not Snyder. There are other varieties similar to Snyder such as Ancient Briton and Agawam. Taylor blackberry is larger, not quite so hardy and has a yellowish cane while the cane of the Snyder is dark brown.

Black Ants.

Editor Green's Fruit Grower: I am bothered with large colonies of black ants which are spoiling my lawn, making very large unsightly places by their excavations. Kindly advise what can be done to exterminate them. I have tried slaked lime with no effect.

I have a very nice large bed of lilies of the valley which is growing too closely together, so close in fact that the flowers do not get to their proper size. Kindly advise as to the best time and way to transplant them, also the best fertilizer to use for them.—John H. Voss, N. Y.

C. A. Green's reply: I have never been troubled with ants in my orchards or berry fields. I have been told that they may be destroyed by pouring scalding water on the mounds which they build. Perhaps it would be well to stir up the colony of ants with a spade and then dash on the hot water while the insects are visible, for if the ants are far below the surface the scalding water might not destroy them. Ants are not generally looked upon as enemies to the fruit grower. L. H. Bailey says: For killing ants: One tablespoonful of bisulphate of carbon poured into holes six inches deep and a foot apart, the holes to be immediately filled up.

The Old Horse.

Dear Mr. Green: In the May issue of the Fruit Grower, in your "Walks and Talks with Readers," "we do wicked things." This item touched a tender spot in my inner soul, and the love I have for the dumb animal. If we believed in the Dr. Osler theory, and were people void of any love in our hearts for the living things around us, we might then feel that when a horse, dog, or any animal who had been under our care, and served us faithfully all their lives, until they had become worn out and useless, we might feel that we should get rid of them some way, and not care much what



THROUGH EUROPE WITH AUNT HANNAH

WHY DON'T YOU TAKE THIS TRIP?

Nearly every woman in America has a desire to visit the countries across the Atlantic. For many years Aunt Hannah has conducted a department in Green's Fruit Grower. Aunt Hannah never expected to make this long wished-for trip; but coming into possession of more wealth than the average person, she decided to gratify her ambition and visit all the big places in Europe.

By special request she was instructed to select photographs of all the really big things to be seen while on this trip, and this collection of photographs has been reproduced, in colors, on fifty post cards, with a complete description of each place of importance visited printed on each card.

While we cannot all make the trip Aunt Hannah made, yet we all can see what she saw while there if we possess a package of these views. These fifty post cards will be sent to you when renewing your subscription to Green's Fruit Grower. For every \$1.00 sent we will renew your subscription three years and send you the complete trip "Through Europe With Aunt Hannah." Better secure this set now as the edition will be exhausted soon.

N. B.—In case you do not care to renew the paper for three years send 50 cents and the paper will be renewed one year, and the complete trip "Through Europe With Aunt Hannah" will be sent by return mail. If you are a new subscriber the above offers hold good. Address,

GREEN'S FRUIT GROWER, Rochester, N. Y.

way, so that we would not have the further care or cost of keeping them. The writer is in possession of an old horse, that has been in the family about twenty years. She is now thirty years old, has been true, kind and faithful, always ready to do our bidding to the extreme, has depended upon us for care, food and protection. We could leave her any place without tying, and she would await our coming, and talk to us at our approach. Her fears for autos and engines were great if we were absent, and she would be frantic on the spot, but would stand and call us to protect her, and in our presence would be calm and satisfied.

It is not necessary for me to ask what my duty is, or what should be done with her now, common sense, and a human heart tells me what my duty and obligation is to her, and if I were to ill treat her, it would be a sin against my God and humanity, and I would be too vile for food for cannibals. No amount of money would induce us to part with her for fear of the abuse that she might receive from the hands of others, and when she dies, if I am alive, she will still be mine, and I will then know she has had kind treatment.—G. W. Cate, Mich.

Mountain Orchard.

Chas. A. Green: I have a mountain farm of 150 acres, part of which lies on the east side of the main ridge, a nice red shale slope or dun colored soil and not underlined by hardpan or clay subsoil, but all substantial ground, very dry and some 2000 feet above the sea, lying in Wayne county, Pa. This eastern slope is free from all western and northern winds, but the eastern strikes it and southeastern and ice storms are sometimes hard on the trees. The timber on this land was of oak, chestnut, ash, cherry, beech, maple and basswood, but mostly of the first two. It is quite early land to work in spring and above the frost line. Would you advise me to risk a peach orchard on this warm and well protected ground, and if plums, pears, cherries, quinces and grapes could thrive? I fully intend to plant

a large apple forest here as it is only seven miles from Forest City and eleven to Carbondale, both good mining markets. Please state what kinds of peaches to plant, as the winters are severe in this region and they linger in the lap of spring. Please answer next month and oblige an enthusiastic reader of the Fruit Grower.—Albert Corey, Susquehanna Co., Pa.

C. A. Green's reply: Your location would seem to be an ideal one for the peach orchard and I see no reason why plums, apples, cherries and pears and other fruits should not succeed there as well. An elevation is desirable for all kinds of fruit growing. In the eastern states I do not advise the planting of orchards in low valleys. On such an elevated site as this your orchards will be inclined to be fruitful while those in the low lands may be injured by severe winter freezing or by late spring frosts. I advise thorough preparation of the soil before planting the orchard so that the sod is rotted and stumps, stones or rocks removed. The orchard should be cultivated every year after planting up to August first, after which sow a cover crop of rye, clover, vetches, etc., to be plowed under in May of the next year.

Editor Green's Fruit Grower: The climate here (Virginia) is one of the best I have ever lived in. The soil is good for the wide awake farmer, both for stock, fruit, truck or grain. It surpasses either of the other places where I have lived and have farmed it.

The farmer of the north has not the slightest idea of the great possibilities of the south to-day. In regards to stock this is the finest climate in the world. Cattle can graze outdoors all winter and not freeze, as they do in the west, and they always find something to eat without digging it out from under a snow bank. Yes, this is the country for stock. We can grow all kind of grasses here that can be grown anywhere and can grow clover to perfection. The world's market at your door and prices for all kinds of stock very high at present, and a very fine home market for all you can raise. Butter here at wholesale, 30 cents

per lb.; milk, 7 cents per qt., for all you can produce, and pork very high in price and very scarce as it is shipped here from the north and west. In regards to truck farms they just grow truck the whole year round. There are winter crops that grow all winter, and the trucker is also growing some kind of crop the year round.

In regards to fruit, the strawberry is about all you will find in this part of the state. Other kinds may be grown such as red raspberries, black caps, blackberries, currants, grapes, plums, pears, cherries, etc., and all sell very high owing to their scarcity.

Poultry and eggs are high and scarce. Eggs sold all winter for 30 cents, and good size chickens for \$1.50 per pair.

In regards to farms and prices there are farms here for all who will come and prices are reasonably cheaper than they are in the west or northwest, and much better in many ways. Some of the large farms being divided up, making into smaller farms. There is very little stock in this part of the state and strange as it may seem some of the farmers do not keep a cow, and lots of them do not raise the pork that they use.

The climate is here, and the land is here, and the greatest opportunities await all who might see fit to come and you will get a royal welcome by the people of the south.—A. S. Laing, Va.

About Peach Planting.

Editor Green's Fruit Grower: Will it do to plant peach trees in the fall of the year in Pa., about the latitude of Harrisburg? Should they be wrapped or protected? Should they be trimmed or wait until spring? Name me a good fertilizer for peach trees and how to apply. What is the best way to keep the borers out of the peach trees? What are the best varieties for a home market of the yellow and white peach? What are the best kinds of plums for home market, early and late? Which is the best kind of quince to plant for home market? Do you know a better winter apple than the Baldwin for the latitude of Harrisburg, Pa.?—Milton D. Burtner, Pa.

C. A. Green's reply: I do not advise planting peach orchards in the fall in New York state but as Pennsylvania is further south it may be safe to plant them there. I should plant them late in the fall and would bank up around the tree one foot or more giving no further protection. Cut off the branches leaving simply straight stubs two to three feet high. Barnyard manure or any other commercial fertilizer that is good for corn or wheat will be good for peach trees. The fertilizers should contain potash and phosphoric acid but not much nitrogen.

Remove the earth from the roots nearest the trunk in June and again in October and search each time then for the grubs and destroy them. Usually the trees infested with grubs can be discovered by the gum or sap which has accumulated at the base of the trunk of the peach tree.

You can make no mistake in planting Champion, Elberta, Crawford's Early, Crawford's Late or Niagara. In plums plant Burbank, York State and Bradshaw. Plant the Orange quince. In some parts of Pennsylvania the Baldwin I am told is a fall apple. If this is so in your locality I would not plant many Baldwin. Learn from your neighbors what varieties of apple succeed best in your locality.

Abandoned Farms.

Editor Green's Fruit Grower: I have been reading with more than ordinary interest Green's Fruit Grower. Your February, 1910, issue on the first page contained a sketch on "Abandoned Farms," which I read with much interest.

I wish to say that I have just returned from an extensive trip through the west, going with a view of investing in orchard land. Was in Oregon and Washington, and liked the climate and conditions existing in these states very much, but as yet have not decided definitely on a tract of land. It is a very difficult thing to purchase land in the west as everything is advertised so heavily and extensively that one can scarcely believe their own eyes, let alone what any one tells you about the value of the land.

Do you personally know of an excellent piece of land, where one could have lots of chickens, and farming in general, with a house on it and probably an orchard, that could be bought reasonable? If you do, kindly write me, or place same in the hands of somebody who will.—Miss Rose Bahler, Ohio.

C. A. Green's reply: I have no definite knowledge of any abandoned farms for sale. There are many farms for sale near Rochester, N. Y., and it is my opinion that there is no part of this

country where farms suitable for growing fruit can be bought so cheaply as here. In order to find a farm here or elsewhere you should come and spend a week or two here. There are many real estate agents in this city who have farms listed for sale. No person is competent to select or buy a farm unless that person has had many years experience as a farmer or fruit grower. If you have not had this experience you should engage the services of some competent disinterested person to examine the farm you propose to buy. The farm should not have much low land, should be within six or eight miles of Lake Ontario if possible, should have good buildings, since buildings can be bought cheaper than built. The fertility of the soil should be inquired into, its depth and its character. Do not buy light sandy soil, nor heavy, sticky clayey soil. You can buy farms here ranging from \$50 to \$200 per acre. My opinion is that you will get a better bargain by paying from \$150 to \$200 per acre than by buying a cheaper farm.

Fruit Man Facing a Crisis.

Editor of Green's Fruit Grower: I am facing a crisis in my career and want your advice. I am nearly twenty-eight years of age. I was brought up in the fruit business. My father was engaged in raising small fruits and cherries for several years. He never had more than ten acres of fruit at any time. My brother and I helped him sell the fruit and sometimes I worked with the pickers and looked after them. I helped at cultivating, hoeing and setting out new plantations, etc.

Four years ago we moved on a farm of 270 acres. My father leased out the fruit farm. The second year he made the renters give up the fruit farm because they could not keep up the rent.

I married about that time and rented the fruit farm of my father and have now been running the business for two years. I have kept a strict book account of all my receipts and expenditures. During these two years I have just made a living and that is all.

I had no man to look after the pickers, so my wife looked after them. I had no one to help me sell the fruit but I kept a man to cultivate and hoe and occasionally had two or three men to help for a few days. We usually lay down all of our raspberries and blackberry bushes and cover them with dirt, and cover the strawberries with straw for winter protection.

Last year I had two-thirds acre of strawberries, one and three-fourths acre of raspberries, one and three-fourths acre of blackberries, and also over two acres of sour cherries. The rest of the twenty acres was in corn, potatoes, pasture, etc. I sold nearly \$1000 worth of fruit and had enough eggs, poultry, hogs, potatoes, etc., to amount to a total of \$1700. My hired man and the picking took \$450. Feed for horses, hogs and chickens cost \$300, not counting what I raised and fed on the place. Rent was \$320. Other expenses such as horse shoeing, repairs, berry boxes, trees and plants, etc., took \$180. The remaining \$450 was required for our living expenses. The receipts and expenses of the year before were nearly the same.

Now I suppose you would say that I should raise more fruit, but if I did how would I get it picked, as I had such hard work to obtain pickers last year? I paid 1½¢ per quart for picking and some of the pickers stayed by during the whole season, but many would pick for a time and get tired and quit.

At present some of my best pickers are working in a factory which started this winter, thus during the coming season I will probably have a harder time than ever to get good pickers.

I have a larger acreage of strawberries and raspberries than last year and expect more fruit.

Owing to the fact that I am not getting anything ahead, and because labor is so scarce, my father and mother and brothers as well as my wife want me to move on a farm where they say I will be more independent and make more money. They believe I will not have crops that must be sold as soon as harvested, nor will I have to gather and sell when the weather is bad, and I would not have to depend so much on help at harvesting time. I admit these facts which they present, but still I do not like farming as well as fruit growing, therefore I hate to give up my present occupation. My father makes about \$1000 yearly on the farm and my brother does fully as well. I have not had much experience in farming as compared with fruit growing.

This part of Iowa is no apple country nor do peaches and pears do well. We used to raise grapes, currants and gooseberries, but never found them so very profitable here.—Subscriber, Iowa.

C. A. Green's reply: The price you

are paying for picking is not excessive. In some places it costs 2c a quart to pick strawberries and more than that to pick raspberries.

If you will make it widely known that you need pickers you will find that they will come a distance of five or six miles if they are well paid. At Green's fruit farm they come in their own wagons drawn by their own horses and bring their dinners with them. At Green's fruit farm we sometimes have to go after the berry pickers with two horse spring wagons. One of these wagons may carry when properly arranged twenty-five to thirty pickers. After the day's work we take them back again.

For anyone located as you are it is desirable to have the various kinds of small fruits rather than to have a large planting of one kind. If you have a plantation of strawberries, red and black raspberries, currants, gooseber-

ries, and grapes your picking will be divided into different seasons so that a small force of pickers can do the work, than if you had all planted to strawberry or raspberry or even to currants. A good thing about currants is that picking can be delayed for a week or two if necessary. But the earlier currants are picked the better jellies they make if they are fairly well colored.

While I cannot decide for you my advice is to stick to fruit growing, for it has been proved to be far more profitable than farming. But make the soil rich and give good culture. Slovenly fruit growing is not profitable.

A state exhibition of models of inventions will be held at Wurtemberg, Germany, in the spring to help poor inventors to bring their ideas to the notice of possible purchasers.



GET A BROWN RUST PROOF FENCE

Don't buy wire fencing with thin, cheap galvanizing. Brown Fences with all No. 9 Coiled Spring Double Galvanized Wires stands and wears like a stone wall. Easy to put up—Requires fewer posts—Won't sag or bag down. 160 Styles.

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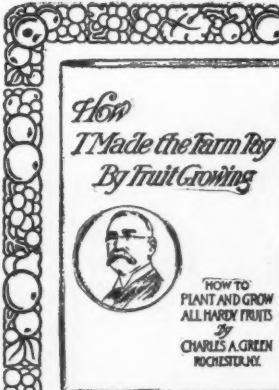
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HOW I MADE THE FARM PAY

An Autobiography which many dollars to one interested in fruit growing. It tells how an average farmer succeeded out of an abandoned farm. By reading this book many have caught the inspiration of the author and by the methods set in the book, have attained success.

By reading this book you can save the expense of publication. Send for free pamphlet on Bug, and Blights, etc., to C. A. GREEN, Box 10, Rochester, N. Y.



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Please mention Green's Fruit Grower.



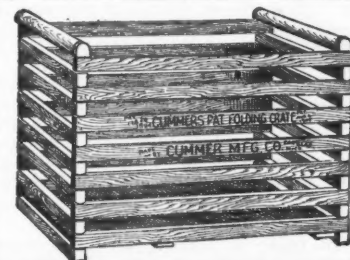
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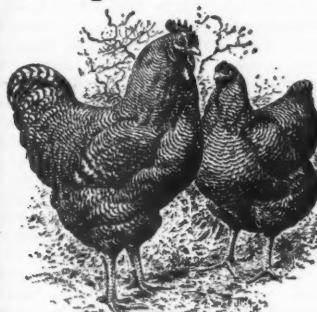
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Barred Plymouth Rocks and Single Comb Brown Leghorns. All strong, selected, farm-grown fowls, only one year old.

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You know that you must depend upon honey bees largely for the pollination of fruit blossoms. Why not keep bees yourself and reap double benefits? A few hives will make a big difference in your fruit crop and the honey you will harvest the first season will more than pay for the initial outlay. It isn't much work either.

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\$224 TO \$244 YEARLY pays all expenses in solid branches. Founded 1830. Has had 30,000 students. Faculty 30 members. Five Literary Courses. Graduates enter first-class colleges on our certificates. Strong schools of Art, Music, Oratory, Commercial, Stenography, Domestic Economy, Agriculture, English Bible. New gymnasium being erected. All rooms steam and electricity. Power laundry. Baths convenient. Pure spring water by pipe. Sanitary. Safe morally. A Christian school. Write Principal.
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All the Early Apples, Peaches, Pears, Cherries, Strawberries, Raspberries, Blackberries, Currants, and Cantaloupes you can ship us. Our market one of the best, our outlet big. Write us promptly what you will have, ask for Booklet "B."
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Popular Fruit Growing

By **SAMUEL B. GREEN, B. S. Hort., For.**

Professor of Horticulture and Forestry in the University of Minnesota

This book covers the subject of Fruit Culture in a most thorough and practical manner. The great growth and wide specializing in fruit growing has led to the increase of troublesome pests. This subject is explained so carefully that a painstaking grower can quickly recognize the presence of these pests in their formation and check their injuries by applying the methods of extermination so minutely described in the chapters "Insects Injurious to Fruits."

Each subject is treated in a most exhaustive manner, every phase of fruit growing is considered from a practical standpoint and the very latest ideas and methods outlined and discussed. An abundance of new thought has been crowded into these pages. Many special drawings and illustrations are used to more clearly explain the author's methods. Among the many topics discussed are: The factors of successful fruit growing, orchard protection, insects injurious to fruits, spraying and spraying apparatus, harvesting and marketing, principles of plant growth, propagation of fruit plants, pome fruits, stone fruits, grapes, small fruits, nuts, etc., etc. At the end of each chapter are suggestive questions on the matter presented.

Fully Illustrated 5 1-2 x 7 inches
300 pages \$1.00

GREEN'S FRUIT GROWER CO.,
ROCHESTER, N. Y.



SMALL FRUIT DEPARTMENT

Editor of Green's Fruit Grower: While sending in my renewal for your valuable paper I would like to say something in favor of the Fruit Grower. It was through the influence of the Fruit Grower that to-day I have over four thousand fruit trees just coming into bearing. Some of the apples and peach trees are loaded to the ground with fruit. I have a fruit plantation with all kinds of fruit in it in bearing. So much for Green's fruit books on fruit growing that tell all about how to start a fruit garden. I subscribed for your paper in the fall of 1900, nine years ago. In the spring of 1901, April, I set my first trees and now they are loaded with fruit. I also bought some potted strawberry plants from Green's Nursery Co., in 1902, August, of the Corsican and Jessie kind and they surely have made good. This patch contains about one acre and it was set among the first trees I set six years ago and it is good yet. We have sold over a thousand dollars' worth of berries from this patch since it was set. I don't know how much longer it will last. I send a picture of the patch so you can see how it looks now in 1909 in full blast.



Those trees are eight years old. There are ninety-two apple trees and some peach trees among them. I think they are good for 100 barrels, and a good half crop of peaches. Now we have all this while raised strawberries in the same ground and it is richer now than when we began.—C. L. Steed, Forestdale, Ohio.

We take the following from one of our exchanges: While most of the grocery stores throughout the city are displaying fine strawberries under their awnings, the best display we have yet seen is at the Ketter Grocery Co. Mr. Frank Ketter of this concern, purchased the entire crop of berries of that matchless farmer and fruit grower, Mr. Steed, of Forestdale. In addition to his other specialties, Mr. Steed has made a specialty of strawberries, and he surely raises the finest and largest of any man in the county. We acknowledge the receipt of a sample box of his berries, and in addition to being of enormous size, they are sweet and of good flavor.

Nipping Raspberry Canes.

In reply to your inquiry I will say that my practice has been to nip off the tips of the new growth of black cap raspberries when they are two feet high. This causes each cane to branch out instead of growing tall and top-heavy. This nipping at the tip end of the green cane also tends to make the bush self-supporting. If the cane is allowed to grow full length it will not support itself. The nipping also removes the necessity of cutting away so much of the bush the following spring. The nipping causes more bearing wood, in my opinion. I would not pinch back the lateral branches but allow them to grow. The tips of these canes can be buried to make new plants. Green's six books on fruit culture gives instruction on this and kindred subjects, price of which is 25 cents postpaid by us.

Yes, we sell a pruning hook for cutting out old canes from raspberry bushes, price 40 cents. No, it is not necessary to put up stakes or wires to keep raspberry bushes from falling over the ground if they are properly nipped back in July and properly pruned each spring.—Editor.

Growing Strawberries.

Written for Green's Fruit Grower by A. G. Symonds, N. H.

Strawberries are a crop that is fast becoming profitable to be raised upon the farm. No crop will produce a larger income to the acre than this berry eaten and relished by every family in America. A neighboring farmer of the writer's produces annually a crop that nets him \$800 to \$1000 and this from two acres of land. His crop coming just after Massachusetts berries are off the market brings him as high as fifteen cents per quart. Surely there is an opportunity for a livelihood in raising strawberries.

Most any soil that is adapted to raising vegetables is good for strawberry plants. A light, sandy loam is preferable to a heavy, clayey soil. The location of the bed has a good deal to do with the period of ripening. For instance, a southern or eastern exposure will give berries much earlier than that of a northern or western exposure. The location for the bed should be one that is well drained but not too dry. The plants like plenty of moisture.

When setting plants select those with few leaves but with good root development—long fibrous roots. If there are too many leaves for the roots, it is best to remove some of the lower leaves. This helps the roots to regain their usual vigor in transplanting.

The strawberry bed must have perfect and imperfect blooming plants. Every third or fourth row should be set with the perfect flowered sorts which

the strawberry. The fertilizer should be applied when disking previous to the setting of the plants. For a medium to good soil, use the following formula, putting on 500 pounds to the acre:

Ground bone, 600 pounds; muriate of potash, 400 pounds.

This analysis: Nitrogen, 1.5 per cent, phosphoric acid, 12 per cent, potash, 20 per cent.

For light soils, the following formula will be better:

Nitrate of soda, 150 pounds; ground bone, 400 pounds; acid phosphate, 200 pounds; muriate of potash, 250 pounds.

This latter formula should not be used if the land has been grown to a leguminous crop within two years.

Preparation of the Soil.—The above named berries respond splendidly to good preparation. The soil should have deep plowing and thorough harrowing before the plants are set. This is also indicated by the fact that these berries are a more permanent crop than the strawberry, as once set, they may stand for a number of years. Where the soil is "stubborn" it will pay to plow the ground several times, in order to get depth. If the soil is deficient in humus, first plow under a legume in order to add it, as this will give the cool moist condition of the soil which is required by these berries.

Propagation.—The raspberry, blackberry and dewberry are generally propagated from suckers or sprouts, but they can also be grown from root-divisions or "cuttings."

Pruning.—The red raspberry should not be summer pruned, excepting that the old canes should be cut out at once after the fruit has been all picked. In the spring the weak shoots should be removed and not more than eight canes allowed to a plant. The best berries will be found on one year wood, and they should not be allowed to fruit more than three years. This can be managed by using method in pruning, so that each year there will be no canes more than four years old.

The black-cap requires summer pruning. The tips should be pinched off as soon as the shoots get to be two feet high, in order to induce side-branching. If these side-branches grow too long, pinch them back. Allow no canes higher than six feet. In the spring re-prune, cutting out weak and excessive growth.

The pruning of the blackberry is very simple, but very important. The large-growing sorts will require more pruning than the others, and those growing on poor soil will need less than those growing on that which is fertile. If allowed to do so, the blackberry will exhaust itself, in woodgrowth in a good soil, hence we curb it by severe pruning. Pinch out the tops as soon as the canes are two feet high, and keep the resulting side-branches under control. Cut out the old canes as soon as the crop is picked.

The dewberry requires very little pruning. Keep the tips pinched back to four feet canes, and allow not more than six to eight to a hill, and never allow them to trail on the ground, but keep them tied up to the wires of the trellis.

The currant and gooseberry are pruned either to tree or bush shape, the latter probably being the better. All the extra shoots should be kept cut out, using one year wood for the fruiting canes and allowing not over a dozen canes to the plant. The old bearing-wood should be cut out after fruiting, and the new wood for next season kept pinched back. If the outer half of the flower cluster of the currant is clipped off you will get larger and finer fruit.

Training.—The raspberries, blackberry and dewberry should be trained to trellises. The best trellis for this purpose is made by setting posts in the row twenty feet apart, extending to a height of six or eight feet from the ground. On these at heights of three and five feet cross-pieces are nailed and on the ends of these, cross-pieces wires are strung on each side. These wires confine the bushes and permit of free cultivation. A wire, or a two-by-four piece can be run along the tops of the posts to steady them.

Harvesting and Marketing.—The instructions given under this heading for the strawberry apply equally well to the ones above named. The essential thing is to pick the fruit in the cool of the day; get it under cover as soon as possible, and do not pack it for shipment until it is thoroughly dry.

Nugget in Mule's Hoof.—A pack mule in from the desert after a five months' prospecting trip developed a limp. An examination of the mule's hoof revealed a gold nugget estimated to be worth \$500. The owners have no idea in what part of the desert the gold was picked up.

The optimist is the fool who has never been stung.

OUR CLASSIFIED ADVERTISING

No display advertising will be placed in this department and no type larger than 6-point. The first three words only to be printed in capital letters. Each abbreviation and number will count as one word. No advertisement inserted for less than \$1. An advertisement containing ten words or less, will be inserted at \$1 per issue, additional words ten cents each. Cash must accompany every order. We cannot afford to do any book-keeping at this rate. Orders must reach us not later than the 15th of the month previous to the month in which the advertisement is to appear.

Special Price to Subscribers.—Paid in advance subscribers, only \$1.00 for 15 words or less. Additional words six cents per word, to paid-up subscribers only.

Terms: CASH WITH ORDER. Address, Green's Fruit Grower Co., Rochester, N. Y.

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GINSENG PLANTS and seeds for sale. Write for prices. P. F. Lewis, Jamestown, N. Y.

BABY CHICKS—Single comb brown and white Leghorns; circulars. Frank C. Edson, Le Roy, N. Y.

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DAY OLD CHICKS—For sale—900 per day, 10 varieties, from fine stock. Shipment guaranteed. Booklet free. Old Honesty Hatchery, Dept. G, New Washington, Ohio.

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IF YOU WANT TO BUY, sell or exchange property, any kind, anywhere, address Northwestern Business Agency, Minneapolis, Minn.

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FARMS WANTED—We can turn a quick sale for you, as we are in close touch with buyers everywhere. Let us show you how to save agents' commissions. Or if you want to buy property of any kind, anywhere, write us. American Investment Association, Minneapolis, Minn.

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BOOK on chiromancy or science of palmistry, 10 cents. Green Novelty Co., Box 2, Station J., New York City.

BROTHER accidentally discovered root will cure both tobacco habit and indigestion. Gladly send particulars. G. Stokes, Mohawk, Florida.

SORE EYES CURED without pain by Dickey's Old Reliable Eye Water. By mail 25c, money back if not satisfied. Dickey Drug Company, Bristol, Tenn.

BELTING, PULLEYS, HANGERS, etc. A fine lot of second hand. State sizes you need and get our net prices. Also 40 endless thresher belts, cheap. Atlantic Mill Supply Co., Wilmington, Del.

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OF INTEREST TO FARMERS. Big Money to Be Made Canning Fruits and Vegetables.

There is an ever-increasing demand for canned goods, particularly canned fruits and vegetables, and it is possible for the farmer or fruit grower who goes into the canning business to build up in a short time a very profitable business.

Canning fruit is very simple and easy. A good canning outfit, of course, a necessary requirement. Such an outfit can now be bought at a very reasonable figure. Undoubtedly the best home canning outfit now on the market is the "Stahl." This machine is thoroughly well constructed, is easily operated, and sold at a low price. Thousands of "Stahl" Canning Outfits are in use all over the country.

According to reports sent out by the various departments of horticulture of the different States, this year is likely to be a record breaker for large crops of fruits and vegetables. Be prepared by securing a canning outfit now.

It will pay every farmer to write to the F. S. Stahl Manufacturing Co., Box 301 F, Quincy, Illinois, for catalogue, which explains more fully how to start a canning factory of your own, and shows explicitly what a paying business can be built up from a small investment.

A Determined Adorer.

A Pig-tale.

Written for Green's Fruit Grower by M. B. Clewatt.

The young of all domestic animals are susceptible to human kindness, and respond to it, each according to his kind; some with winning grace, as the pet bird which greets you with a whispered "Sweet! sweet! sweet!" its wings trailing and its little body quivering with ecstasy; or as the pet kitten, which squeezes your caressing hand to its breast with its small furry arms, while its half shut eyes seek yours, brimful of the mysterious love of the brute towards man; not to mention the well-nigh human expression of his heart's adoration given by the noblest of them all, the dog. But how are we to characterize with due respect an exhibition of poor piggie's tenderness? His affection may be as deep as theirs yet who can prize assurances given with a moist snout printing impressions of itself all over your polished boots, to the music of ventral "grumphs?"

Also we humans have set up arbitrary fashions in animal companionship which the animals themselves often rebel against; thus the dog may follow us in public and no one smile, but not the cat; and as for a pig—oh, fie! Be it pink and small as a candy toy, be it playful as Puck, tender "as a baby's sigh"—never in the world! And yet the best of men cultivated

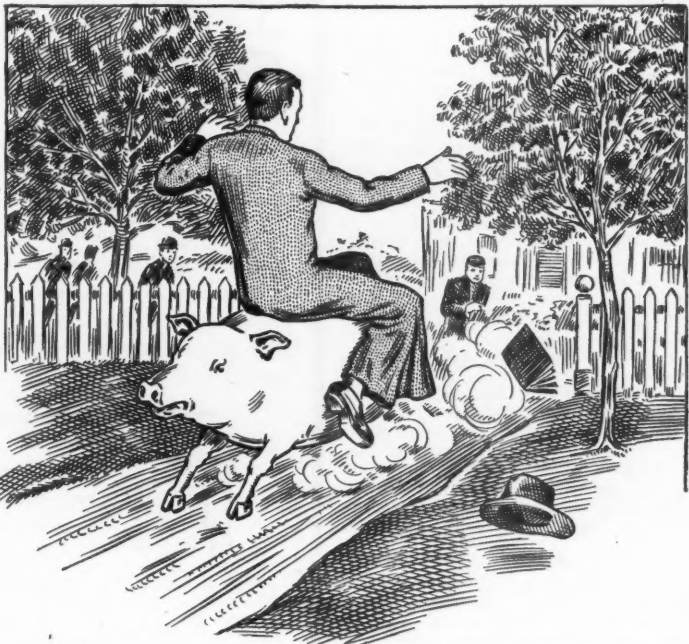
blood was up; he charged, head down, sent the gate crashing wide, and shot through like a catapult.

Ill luck directed his course between the reverend gentleman's legs, while the shock struck them from under him, and set him down astride his assailant; and with porcine shrieks of fright the burdened beast tore up the driveway, while his rider, face to the rear, struggled desperately to free himself from the entangling swathes of silk which bound him to his undesired mount.

Such a roar of laughter as followed them! There was not a soul there who did not revere their pastor above all men, and for worlds they would not have wounded him; but the sight was really too funny, and for a minute they laughed till they cried. Only for a minute though, then some one hoped he would not be hurt, and the joke was no longer laughable.

A couple of the best runners started in pursuit, and overtook the pair near the house, separated by this time, and stationary. The parson stripped off his gown, which was carefully folded up and laid on the grass, was gently prodding up and down piggie's backbone, while that worthy "grumphed" complacently.

"I think he's not harmed, he doesn't wince at all," said the parson in a tone of relief. "But I'm sorry about the gown, I don't know how I can face the ladies who were so good," and he ruefully displayed several long slits



the friendship of a pig,—with results, I admit.

He was a country parson, and had enough ground attached to his parsonage to support a horse and cow, not to mention the smaller animals which thrive on farm produce.

They all knew him, down to the little pig, whose home was in a parson-built sty (from which he was always escaping), and vied with each other in claiming his attention; for, parson-like, he was unaffectedly fond of the lower creation.

One Sunday morning an unusually large congregation assembled in the pretty white church just across the road from the parsonage grounds; it was the twenty-fifth anniversary of his pastorate among them, and the ladies had presented him in honor of the occasion with a handsome new silk pulpit gown which he was expected to wear.

The service was over; the parson had shaken hands with some scores of kind souls who wished to show their affection—and well he deserved it—and had started down the road towards his own gate some fifty feet away, when up scrambled Piggie from the shadow of a rock some distance on the other side of the gate, and trotted to meet his beloved master.

The parson foresaw a fiasco, and quickened his stride, his silken gown flowing around his stately figure (for there was no vestry to disrobe in), if he could reach the gate first he thought he could shut it between him and his too pushing adorer, and "the incident would be closed," in diplomatic language.

But the longer his strides grew the faster piggie pilled his trotters, while his gentle squeaks of pleasure rose to excited squeals; the parson sprinted; his gown billowing gloriously out behind him, and piggie galloped.

The people stared at the mismatched pair in stricken amazement.

The parson reached the goal first and tried to slip through the gate and slam it in piggie's face, but piggie's

in the ecclesiastical vestment which effectually ended its career. "Am I hurt? No, no, not in the least, thank you; though the rascal did knock the breath out of me." And he laughed as heartily as his people had done as he realized the figure he must have cut.

Wounded vanity was as impossible to the good man as anger at a brute, however provoking it had been; and the only punishment inflicted on piggie was the securing of his pen so that he could no longer supply "a little diversion after the service," and a noble trough of warm swill to sweeten his captivity.

Black Raspberries.

When set in rows both ways, even at three feet, the narrow way, one can get through with horse and cultivator at this time, reducing the time required to work out the weeds to a minimum, because the new growth is small. The rapid growth resulting from the cultivation given usually brings the side branches to the ground, and the tips can be set in for plants. The sale of these will sometimes pay the whole expense of caring for the patch. If no plants are wanted, after the leaves drop trim back to the bend, which will leave them stiff and unbreakable.

At any time of the year, when a plant is found which is not healthy, dig it out, root and branch, and burn it. It never pays to leave a plant that is sick for its fruit, and to set plants from it is madness; for a diseased plantation will result. If a new plant is set in at once—which can be done at almost any time—the field can be kept for years. I have an experiment plot now five years old which receives no cultivation. It is heavily mulched with wheat straw as often as is necessary to keep it clean of weeds. Some of the time the straw is a foot thick, and we sometimes have to pull a dock, a daisy, or a thistle; this is all the cost aside from pruning and picking. (Editor's note—Never plant closer than 3 1/2 feet apart in rows, with rows 7 feet apart.)

Warranted to Give Satisfaction.

Gombault's Caustic Balsam



Has Imitators But No Competitors.

A Safe, Speedy and Positive Cure for Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lamenesses from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. For descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Cleveland, O.

FRUIT BOOKS AT HALF PRICE

Our office caught fire and these books were slightly smoked but not injured. One booklet is "Green's Six Books on Fruit Culture," Price 25c. The other booklet is a pamphlet on "Plums and Plum Culture." C.A. Green offers these two publications for 25c.

Send 25c. and get these two publications by mail.

Don't delay for the supply is limited.

If you send 50c. you will get these two publications and Green's Fruit Grower one year, all for 50 cents. Address,

Green's Fruit Grower, Rochester, N. Y.

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The Pumps that pump easy and throw a full flow. The cheapest pump is the best pump, that's a Myers.

Fig. 1126

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with your name and address. This is a valuable premium. It is a nickel-plated machine which you can carry in the pocket, with self-inking rubber type, which stamps your name and address on envelopes, letter heads, etc., so that your letters cannot go astray.

OUR OFFER: Send us two new subscribers at 50c. per year each, and we will send you the rubber stamp with your name and address in it, postpaid. (Write your name and address plainly.) **GREEN'S FRUIT GROWER, Rochester, N. Y.**

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This cross-section shows why it lasts.

Trinidad Lake Asphalt
Asphalt-saturated Wool Felt
Trinidad Lake Asphalt

Ask any wideawake dealer for Genasco. And get the up-to-date fastening—the Kant-leak Kleet. Does away with cement and large nails. Look for the trademark and insist on the genuine. Write for Good Roof Guide Book and samples.

THE BARBER ASPHALT PAVING COMPANY
Largest producers of asphalt, and largest manufacturers of ready roofing in the world.
PHILADELPHIA
New York San Francisco Chicago



Poultry Pointers.

Work for the future.
Have regular feeding hours.
Fight lice and keep hatching.
Keep the feed troughs clean and sweet.

A fat hen is queen on the market—make her so.

Separate the males from the females in the early broods.

If the little chick's wings begin to droop look for lice.

Don't be afraid of the market glutting with eggs and poultry.

Keep a good supply of oyster shells before the fowls at all times.

Sour or musty food is sure to start bowel trouble.

Eggs have a tendency to grow smaller as the laying season advances. Milk in any form may be given to the poultry with a profit.

Place the young cockerels intended for market in a pen by themselves and force them for quick maturity.

Do not let eggs accumulate in the nests, as it has a tendency to encourage the hens to broodiness.

Good wheat at full price is cheaper than screenings at half price for the poultry.

Gapes come largely by exposure to cold and damp weather and allowing the chicks to be out in such weather.

Good care and right treatment will even make the common chick more productive.

When you whitewash put in a little carbolic acid, it purifies, and it is deadly to all vermin or insects.

If eggs are the object, choose your layers from the best laying strains—not highest scoring.

Utility does not mean mongrelism, but breeding with the object point, "better poultry for eggs and meat."

If you can not dress poultry so it looks good, better sell it alive, as it will bring more.

A good many troubles in raising little chicks can be overcome by keeping the water dishes clean and sweet.

The "best ration" is the one that works best with your stock and gives you the best returns.

A good way to make artificial shade is to drive four stakes in the ground and rip a burlap sack and stretch it and fasten corners to stakes.

If you get soft shelled eggs, it indicates the hens are too fat; feed less, and keep them busy and do not feed fattening foods.

Where you find filth you find vermin. These two things cause a host of diseases, and right here is where the losses begin.

Oats is one of the most important feeds we can feed to growing chicks, as it is a muscle and bone builder and makes fine feathers.

Unless you keep everything in a sanitary condition about the poultry yard this month, it is more apt to cause you trouble than any other month during the year.

Cats are quite fond of little chicks and once they get the habit they can destroy and devour as many chicks as any other animal that preys on the feather tribe.

Success will not come the first year. In fact it takes two or more years to get started in the poultry business, and then you must keep everlastingly at it to make a success.

Some hens are born layers, others acquire the laying habit, others get credit for being good layers when they are not. The trap nest picks them out and leaves no guess work.

Science says impure food fed to poultry is the cause of many diseases in man. Then as poultrymen we should be careful what we feed our poultry and the care we give it.

Eggs and meat are the foundation of the poultry business. Let us aim for this standard more, then we will have better "standard breed" and more profitable poultry.

Don't sell those early hatched pullets. You are exchanging a dollar for fifty-cent pieces when you do. They are the all winter layers, the paying kind.

"Net profit" in the poultry business is what is left after all expenses, including labor and interest on the whole

capital invested, are paid. What is your "net profit?"

Saint Louis, Missouri, has been decided as the place for holding the next annual meeting of the American Poultry Association. A good place to go.

The killing of poultry should be done by bleeding in the mouth with a sharp knife. Make a sharp cut lengthwise in the mouth, to make them bleed; then a slot upwards, which penetrates the brain.

The chick is an early riser and the attendant should also be, and if he can not get up with the chicks, better prepare their breakfast the night before, after they have gone under the hover or into the coop for the night.

Feeding and special care of the pullets this month to develop them early and bring them to maturity in a vigorous condition will more than repay you for the extra care and work by a full egg basket this coming winter.

How many mistakes in mating have already come to light. It is bound to crop out, mistakes always show up where correctness is not noticed. We should take note of our matings that produce the best and profit by last experience in making our next matings.

You should study to know the value of the food you feed your poultry to get the best results. You may not do this in a way that a scientist would, but you can do it in an experimental way, and experience is far the best teacher; however, it is the most expensive.

The hen gathers, mixes and puts together in organic form 65 grains of water, 120 grains of fat, 108 grains of lime, 120 grains of albumen, 26 grains of sugar, and 10 grains of ash. With her marvelous inside fixtures she puts her humble grist together and shells out the most miraculous of animal products, the egg.

As the breeding season is drawing to a close you will probably have many breeds to dispose of and right now there are many who will buy stock to get a start. Even if hatched in July and August, with good care, they will make good spring and summer layers. If you have breeders to sell advertise at once.—"Poultry Pointer Magazine."

Laying Pullets.

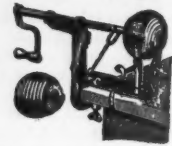
Begin next month, and, during the summer cull out the old hens, reserving only such of the yearlings as have proven good producers; the old roosters should go just as soon as you are through hatching unless you need their company, says W. E. Vaplon. This thinning out means more room and better care for the pullets. Let the weaklings die; mark the slow growing pullets and sell them with the cockerels. During October make a last severe culling and keep nothing that does not mean business; your 200 pullets will cost about eighteen eggs a day for feed, will produce about fifty or sixty eggs above that number when they are at the best price, and will gradually increase in numbers.

Chicks' Unusual Experience.

Three little chicks belonging to W. B. McCracken, of Long Beach, Cal., have pecked their way into the world after an unusual experience. For thirteen days the mother hen had been busily attending to her sitting duties when a hungry snake drove her from the nest and gorged itself with three eggs. The snake lingered about the premises and McCracken shot it. Wondering at its odd proportions he performed an operation and found the eggs. They were placed back under the hen and at the end of the regulation time were hatched.

Max Muller, one cold winter day, reviled his fowls, that did not lay, blasted pullets and cursed the cocks, anathematized his numerous flocks, and vowed he'd sell them all for soup, for lack of business in the coop. He'd fed them oats and fed them wheat, chopped-up barley and scraps of meat, condition powder and oyster shell, all the diet they liked so well. He'd used trap nests and all of that—they just laid 'round and put on fat.

Improved Apple Parers, Corers and Slicers.

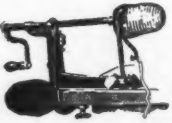
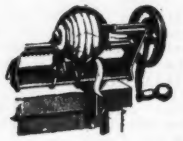


No. 1, for Home Use.—Pares, cores and slices the fruit, and then, pushing off apple and core separately, is ready to repeat. This machine stands beyond the reach of all competitors. There is nothing about it to break or get out of order while the wear is so slight as to make it almost everlasting. Can be used to pare without coring and slicing. Weight, packed, 3 lbs.

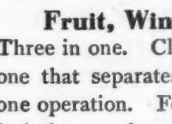
Price, No. 1, complete, only 95 cents.

No. 2, for Home or Dry House is larger than No. 1 and faster, and may be used for pears and quinces. It has a steel feed screw, and fastens to the table at both ends. Parings fall clear of the working parts. Has automatic push-off for removing the core. Pares, cores, and slices, and may be used to pare only. These parers all cut a thin peel, removing the entire skin without cutting away the flesh of the fruit.

Price, No. 2, packed for shipment, \$3.50.



Potato Parer.—Pares any shape or kind of potato better and quicker than can be done by hand; enters into and cleans out the eyes, and by taking a thinner paring, saves 50 per cent. of the outside potato, which is ordinarily wasted. This machine is also suitable to quinces and pears. Weight, packed, 3 lbs. Price, 95c.



Fruit, Wine and Jelly Press.—Three in one. Cleanest and best. The only one that separates juice, seeds and skins at one operation. For making wines, jellies and fruit butters from grapes, strawberries, raspberries, blackberries, gooseberries, currants, quinces, pineapples, etc. The dryness of the pulp may be regulated by thumb screw at the outlet. Weight only 15 lbs. Special price, complete, \$3.95.



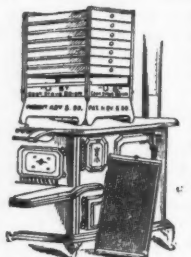
Sensible Wine or Cider Press.—A well-made and handsome press for making cider, wines, jellies, lard, syrups, etc. Made with special reference to strength, guaranteed against breakage under any fair usage. All iron and steel, stronger and better than the old wooden press. It has double curbs.

Prices: Four qt. curbs, weight 30 lbs., \$2.95.

Ten qt. curbs, weight 40 lbs., \$3.95.

FRUIT EVAPORATORS

There is money in evaporating fruit. Our catalogue shows a full line of fruit dryers, parers, corers and slicers of every capacity, for home and commercial purposes.

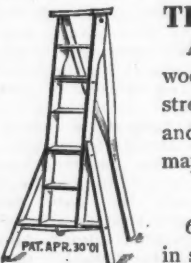


THE U. S. HOME EVAPORATOR

Thoroughly tested and approved. Latest, cheapest, best. Can be used on any stove, dries any fruit.



Read This: To introduce our Home Evaporator and our No. 1 Parer, Corer, and Slicer (see description at top of page), we offer **both for only \$5.50.** Weight less than thirty pounds; can go by express or freight at very small cost. Just think of it! **a Parer, Corer and Slicer with a Fruit Evaporator, all for only \$5.50.**



THE NIAGARA FRUIT LADDER

A ladder made from the best selected white basswood, with tie rods at every other step. A model for strength, lightness and durability. It always stands and never rocks, no matter how uneven the ground may be.

Price, 25 cents per foot.

6 foot, 8 foot, 10 foot and 12 foot always carried in stock.

Send for complete catalogue of fruit supplies. Everything for planting, cultivating, spraying, harvesting, and marketing fruit.

GREEN'S NURSERY CO.

M. H. GREEN, SUPPLY DEPARTMENT, ROCHESTER, N. Y.



Back to the Farm

Back to the farm where the turkeys strut and hobble.
Listed up strong at full thirty cents a pound;
Back where they weigh legs and charge you for the gobble;
Back where the bank bills litter up the ground;
Back where Hil Hayseed opens wide the throttle,
Puts on more steam and crowds you in the ditch;
Back where the cream grows at forty cents a bottle;
Back where the squabs hatch, but only for the rich;
Back where the ducks in their arrogance are quacking;
Knowing their price tags keep them safe from harm;
Back where the farmhands all are busy stacking
Bank checks and greenbacks—back to the farm!
Back to the farm there is riches in the flour,
Wealth in the beef, and money in the whey;
Back where the mutton's rising every hour;
Back where they measure money up like hay;
Back where the bees get overtime for working;
Back where the sheep grow golden fleeces for wool;
Back where the lard sells at seven plunks a firkin;
Back where the old sock's stuffed and running full;
Back where good fortune's never false nor fickle;
Back to the land of the strong highwayman's arm;
Back to the jam and the silver-plated pickle,
Back where our money goes—back to the farm.
—J. W. Foley, in "Saturday Evening Post."

The Conservation of Water in the Growing of Fruits.

Written for Green's Fruit Grower by M. G. Feint.

In the heat of the season's work we are apt to forget the resources we have at our command, in the matter of moisture. Probably not in several years has the soil received such a thorough wetting, such a complete saturating with moisture, as it did this last spring. You will remember that cellars that never or seldom before were known to be wet had little rivulets trickling down their sides, or pools bubbling up on the bottom from subterranean depths. Furnaces were put out of commission and the vegetables and cellar furniture went bobbing about on a short vacation trip. This general inundation was caused by the melting of the record breaking amount of snowfall visited upon us. Its depth, and its continuity of its stay on the ground, had drawn all frost out of the soil, leaving it soft, and ready to drink its fill of water.

The long sunny thaws of early spring caused by far the greater part of this to sink directly into the ground, instead of running rapidly off the surface in the swollen creeks and streams, as is usually the case. This wonderful quantity of water that Mother Nature has absorbed into her bosom for future use should mean a great deal to the intelligent horticulturist. By proper methods of conservation this remarkable sponge-reservoir of water can be made to yield abundant crops of fruit, though we get the long droughts that we have had for the past few seasons.

Moisture is the first essential for the growth of crops of any kind. Potatoes and cabbage are over 90 per cent. water; so also is green corn, most garden stuff, fruits, and in fact nearly all vegetable growth is largely water. Hence the importance of the moisture supply.

The earth is a great sponge in which is stored up vast quantities of water replenished at various intervals and fed out constantly, in minute quantities.

This constant outgo from the main storage, though invisible to the eye as free water, is sufficient to adequately supply all vegetable growth, if properly husbanded. Its constant supply is kept up by capillary attraction, which may be illustrated by the spilling of a cup of water on a polished floor.

The unthinking person hastily seizes a dry cloth, and after much difficulty succeeds in getting the water off the floor. The experienced housewife, however, immerses a towel in a basin of water and wrings it out dry. With this cloth, the fibres of which are moist, but not saturated, though ready to quickly assume that condition, the floor is speedily relieved of the surplus water or in other words, is wiped dry.

Another illustration of this principle of capillarity, is the dipping of a corner of a linen towel in a pan of water and allowing it to remain hanging over the side of the pan all night. Morning will disclose the whole towel saturated and most of the water fed out of the pan onto the table.

A certain amount of moisture is necessary to make available the plant food that is in the soil. We often hear of the wonderful supply of plant food that is absolutely wasted on the dry, arid deserts of the west, which only lack water to make them "blossom as the rose."

The form of water most valuable to the plant is not free water in the soil, but the thin, almost invisible film of water which adheres to each tiny particle of soil. This is the form in which it is best adapted for absorption by the tiny root hairs of the plants. The amount of this film moisture in the soil does not need to be very apparent to the senses of either sight or touch to maintain a satisfactory growth. But the supply should be constant.

It is astonishing how dry soil may feel to the touch and still produce well, if properly worked. In fact too much water is quickly fatal to growth. Soil that contains not less than 15 per cent. more than 26 per cent. water will make good growth.

The constancy of the supply of this film moisture may be kept up, even in long periods of drought, by the maintenance of a mulch on top of the soil, to prevent evaporation and loss. The earth, beneath the protecting blanket of the mulch, acts as did the towel in the pan of water, and faithfully carries the moisture to the surface as needed by the plants. The mulch may be of extraneous matter, as sawdust, straw, leaves, etc., in the case of small crops, but in general it consists of very finely pulverized dry soil. It need not be thick, but must be kept very fine by constant working. If at any time it is allowed to harden or crust over, and its special tendency to do this is most apparent after rainfalls, it will open up in pores and cracks, and great loss of moisture by evaporation will ensue. This soon robs the plant life of its due share and it ceases to grow, and finally dies.

Thus we see evidence of divine foresight. "By the sweat of his brow shall man's bread be made." There was evidently a preconceived man with a hoe, or other cultivator, to cope with the difficulties of the drought, there being also provided a store of moisture sufficient for his needs, if intelligently and painstakingly worked out.

During our last two summers we have had very prolonged droughts. Our general farmers who understand this principle of frequent tillage, succeeded in producing profitable crops of cabbage, corn, and potatoes; while those who farm it on the old style principle, namely cultivation merely to keep down the weeds, turned out very poor crops, or none. Some of these are short sighted enough to lay their failure to their soil, or to "luck."

Our spring was an unusually early one, disastrously so in many localities. The early days of sunshine forced a precocious development of buds that was later pinched by frosts. Those warm, sunny days did also other damage to the horticulturist who is not a hustler, and always prepared to make the best use of the weather.

The orchardist who did not early get among his trees with plow, harrow, and cultivator, and put his soil promptly into shape to produce the best results was a heavy loser, though he may not have appreciated the fact just at that time.

Fields whose surface was fallow, or not protected by some cover crop, and were neglected during our balmy, sunny March, were quickly laid open by deep cracks and fissures, whereby several inches of water were fed out and lost to the owner, by evaporation—wasted.

As it seems likely, from the devastation of our forests, that we may look for repeated and continuous droughts in future, it behooves us to begin early in the year to harbor our store of moisture.

We should never try to raise a hay or grain crop in the growing orchard, as it is impossible to properly conserve the moisture. The growing of some tillable crop, if not carried on too closely to the trees, is not inadvisable, and may be combined with orchard fruit with good results for each, if the soil is worked frequently enough.

The truth of this was strikingly shown by two young orchards on adjacent farms, with similar soil foundations in the start.

One was seeded to grass and mowed for six or seven years, with no apparent increase in the growth of the trees. The other has never been allowed to sod over, but has been properly fertilized and planted to corn, cabbage, and potatoes, with careful working of the surface soil each season. This orchard is now beginning to bear abundantly and has paid for itself many times in the value of the companion crops grown with it.

The grass cut from the first field did not amount to so very much in value

and the trees were plainly injured by it, especially in seasons of drought, when they were robbed of the necessary moisture. Long continuance of such management with young orchards sometimes results in permanent injury, as they become stunted and hidebound.

Peach Leaf Curl.

If this disease is on your trees it will soon become evident in the unfolding peach leaves. You should watch the leaves carefully for the next two or three weeks to determine how effective your spraying has been for its control. Remember that the effectiveness of the spray will depend largely upon two factors, first whether it was applied before the buds begin to swell, and second, whether it was thoroughly done. Be slow to lay failure to the mixture used. It has been demonstrated beyond a question that lime sulphur, bordeaux mixture or copper sulphate will effectually control this disease. It is of course, too late to spray for the disease now, but a careful examination of your trees, and a study of the disease in the light of your spraying operations of this year, should help you to more satisfactorily handle the proposition next year. Bulletin 276 on Peach Leaf Curl and its control is now ready for distribution. This bulletin gives a careful description of the disease and the habits of the fungus which causes it, together with the most modern methods of controlling the malady. You will be interested in comparing the date in this bulletin with the results which you have gotten on this disease. Full directions are given for the preparation of lime sulphur solutions, bordeaux mixture, etc., for the control of the curl. This bulletin is free to growers in the state of New York. Drop a card to us at once asking for a copy of the bulletin. If you do not get it upon first request write again. Your name will go on our list for further bulletins along the line of plant diseases. Address W. H. Whetzel, Pathologist, New York State College of Agriculture, Ithaca, N. Y.

Cold storage is a Yankee invention that is unknown in the Orient. Eggs are preserved there by wrapping them in clay, and the process has reached such a degree of perfection that eggs can be preserved three or four years in all their pristine freshness.

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NATIONAL CO-OPERATIVE REALTY CO.
47 Marden Building
Washington, D. C.

The Champion Potato Machinery Co., of Hammond, Ind., are now erecting a large storage house for their supply of paints and oils. The building, like their factory buildings, is of fire proof construction, using only concrete and steel. This move will further eliminate the fire risk at this already up-to-date plant. Their 1910 catalogue is now off the press describing the well known O. K. Champion line of potato machinery and will be sent to anyone interested.

Why Risk Windmills?

They are DANGEROUS in High Winds and USELESS on Calm Days
Get a FARM PUMP ENGINE!

Down
She
Goes!

The appalling loss of life and the enormous property damage resulting from blown-down windmills must stop! Every year adds to the long list of killed and injured—every great storm leaves death and devastation in its track, due to these dangerous structures. Many are killed or crippled for life while working in mid-air, oiling or repairing windmills.

Windmills Must Go!

Not only are they a constant menace to life and property, but utterly unreliable—often idle for weeks at a stretch,—waiting for wind,—and always getting out of order when the need for water is greatest.

Thanks to the wonderful Fuller & Johnson Farm Pump Engine, farmers are no longer forced to depend on these

unsatisfactory makeshifts. Thousands are doing away with windmills and securing a guaranteed water supply by using this great little pump engine.

Fuller & Johnson Farm Pump Engine

Pumps
800 to
1,000
Gallons
per Hour

Pat. June 15, 1909
Others applied for



Sold by Dealers

Any dealer who is not already selling this Engine should write for our Special Proposition.

Beats Any Windmill!

In comparison with this powerful little engine, a windmill is a joke. The engine outpumps the windmill ten to one, for it "keeps right on churning," regardless of wind or weather, heat or cold, pumping 800 to 1,000 gallons per hour! Has a lifting power of over 15 tons per minute! Needs no belts, arms, jacks, anchor posts or special platform. All it needs is oil and gasoline and someone to start it and stop it.

Water When You Want It!

The Farm Pump Engine keeps tanks and troughs full of fresh water all the time. No need of storing water, to become stagnant and injurious to stock, as is the case with windmills.

The engine will throw water as high as a house, giving ample fire protection. Pipe water anywhere. Use it for irrigation, sprinkling lawns or washing buggies and autos.

The Engine Is Complete in Itself!

It is a self-contained Portable Power Plant, which in addition to pumping service will run all kinds of light machines—separators, feed cutters, etc. You can't beat it as a general utility engine for farm use.

Send for the name of nearest dealer who has this amazing engine on exhibition. Ask for Free Book giving full details and letters from delighted users. Address (119)

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Farm Pump Engine Book ☐
BIG ENGINE CATALOG ☐

CUT THIS OUT AND

Be Patient and Smile Through Your Tears.

Written for Green's Fruit Grower by James A. Green, Detroit, Mich.

It is easy enough to be cheerful,
When the world is all sunshine and
gay.
Without a cloud in your sky or a shadow,
And your plans all work out the right
way.

When good health, that greatest of
blessings,
That God gives to his children on earth,
Fills a vigorous and harmonious body,
Where no pain or disease can find
birth.

Then certainly life is worth living.
With your heart and your nerves all
in tune,
Then it's easy to be cheerful and happy
As a lark on a bright day in June.

But when health slips away like a
mirage,
Is shattered with torturing disease,
And pain racks your nerves and your
body,
And life's robbed of comfort and ease;

Or when loved ones we cherish most
fondly,
Are stricken, and fond hearts are stilled,
The lack of their love and devotion
Leaves a void that can never be filled.

When your cherished plans all go a
glimmering,
And disappointment looms up dark and
dread,
It is then our true courage is tested
And needs all the strength of the
heart and head.

—Before sailing recently on the steam-
ship Adriatic for his summer home in
Scotland, Andrew Carnegie said: "In my
opinion greater progress has been made
by the latest tariff revision towards the
perfect tariff than ever before. Of course,
it is hard to please everybody, and I can
only express my own opinion by quoting
something I read on a postal card: 'Let
the scowlers scowl, let the howlers howl,
and the politicians go it. The country's
all right and I know it.'"

—News was received recently of the
death at Hastings, Eng., of Dr. Elizabeth
Blackwell, the first woman to be gradu-
ated from a medical school. She was
88 years of age, having been born in
Bristol, Eng., in 1821. When she was
eleven years of age her father, a sugar
refiner, came to New York and estab-
lished himself in business, later remov-
ing to Cincinnati. The daughter was
graduated in 1849 from the Geneva (now
Hobart) Medical College. She returned
to her home in England in 1869.

—Campaign Against Kissing. —The
world's health organization, with Cincin-
nati as headquarters, which has for mot-
to "Kiss not," has just sent out some
telling tracts against the bacteria
spreading custom of osculation. "Kiss
not" buttons are also being distributed.
"Why not stop now?" warmly asks the
circular of the society, and adds: "It is
a time-honored custom, and one person
cannot stop it." It needs two, certainly.

—Farmers frequently ask how they
may avoid buying garbage, muck tank-
age and other worthless sources of nitro-
gen used in low grade commercial fer-
tilizers. Here is a good rule: Try the
1.65 per cent. nitrogen rule. If you do
not care to put more than about so much
money into complete fertilizers, then let
that amount buy what it will of the 1.65
per cent. kind and use this in smaller
quantities so that it will cover as much
ground as the cheaper kind. You cannot
lose by so doing.

—Governor Hughes (N. Y.) signed the
following bill:
Mr. Murray—Requiring bottles or jars
used for milk or cream to be of full
measure and requiring the number of
trade mark of the manufacturer to be
blown in the bottle, so that the attorney-
general may know against whom to pro-
ceed if the law is violated, for which a
penalty of \$500 is provided. Any dealer
who uses a bottle not so marked and of
less than the capacity required is deemed
to be guilty of giving false or insufficient
measures. The law takes effect January
1st next.

—A Commission on Cost of Living.—A
commission appointed by the state of
Massachusetts recently spent eight weeks
in investigating the causes of the in-
creased cost of living. Among the prin-
cipal causes stated in the commission's
report are: The increase in the world's
gold supply; a reduction in the volume
of production on the one side and ex-
tension and diversified consumption of
commodities on the other; waste, public
and private, and more particularly the
"enormous waste through uneconomic
expenditures for war and national arma-
ments."

\$33.50 UP **Galloway**
Only **33** **BATH IN OIL**
High Grade Separator—Direct
Save \$25 to \$50 direct at my factory
price—freight prepaid. Get the only
Separator that runs on "Bath Oil,"
like a \$5,000 automobile. This
alone is worth \$50 extra, but
costs you nothing extra.
90 Days'
Farm Test—Freight Prepaid
Why pay \$85 to \$110 to dealers or agents
who cannot sell you a separator equal
to the Galloway—closest skimmer—
easiest run—easiest cleaned—10-year
guarantee. Send for **BOOK FREE**
WM. GALLOWAY CO.
863 Galloway St., Waterloo, Ia.

PATENTS Watson E. Coleman, Wash-
ington, D.C. Books free. High-
est references. Best results.

Apple Barrels

Large and Small Orders Solicited.

Low freight rates, and prompt ship-
ments to all points.

10,000 Always on Hand.

P. McKANNA'S SONS, Honesdale, Pa.

GREEN'S FRUIT GROWER

AN ILLUSTRATED MONTHLY JOURNAL.

GREEN'S FRUIT GROWER CO., Publishers.

C. A. GREEN, Pres. and Treas. R. E. BURLEIGH, Vice-Pres. J. W. BALL, Sec'y.

Charles A. Green, Editor.

Prof. H. E. Van Deman, Associate Editor.

Price, Three Years for \$1.00. Postage Free.

Office, Corner South and Highland Avenues.

Rates for advertising space made known on application.

Entered at Rochester Post Office as second class mail matter.

Subscribers who intend to change their residence will please notify
this office, giving old and new addresses.

OUR ADVERTISERS.—We believe that the advertisers using space in Green's Fruit Grower are a worthy and
deserving class of business men. It is not our intention to permit the insertion of any swindling advertisement in these
pages. If any subscriber has been defrauded by an advertisement appearing in Green's Fruit Grower he will do us and
the public at large a service by at once reporting this advertiser to us, giving full particulars. Upon receipt of this
complaint we will investigate the affair and will do everything in our power to bring about a satisfactory adjustment.
If we find that any advertiser has defrauded our readers, we will deny him space for his future ads. in these pages.

CURRENT COMMENT.

—It is never too late to try.
—Spare the rod and lose the fish.
—The early clerk catches the raise.
—That word to the wise is: Advertise.
—Save the pennies and the dimes will
take care of your notes.

—Don't buy a complete fertilizer that
claims (on the tag) to contain less than
1.65 per cent. of nitrogen.

—Last year 437,176,241 tons of both
bituminous and anthracite coal were
produced in the United States.

—The average cost of hauling one ton
of produce one mile over the roads in
the United States is 23 cents; in Europe,
it is 8 cents.

—Hall to the orchardist who expects
to do better in 1910 than he did in 1909.
Turn over a new leaf in the right direc-
tion—it's time.

—Nine-tenths of Canada's wheat out-
put is raised in Saskatchewan and Mani-
toba. Its total output last year was
176,000,000 bushels.

—The diluted lime-sulphur wash one
to forty is thought to be safe in spray-
ing the apple, pear and quince for
fungous diseases during the summer
when the leaves are on.

—Reports from the northwest tell of
fourteen strawberries making a yard.
Another nine berries make a quart. Re-
sults were obtained by nipping off nearly
all the blossoms—thinning the fruit as it
were.

—Damage to apple leaves and fruit by
the use of the bordeaux mixture in
spraying for fungous diseases is a ques-
tion of climate. Don't use it when the
leaves are wet from dew, fog or rain or
in the middle of the day when it is
hot and there is a strong breeze.

—Commander Robert E. Peary to-day
presented the Royal Geographical Society
with one of the sleds which he took to
the North Pole. He had named the sled
Beaumont, after Admiral Sir Lewis A.
Beaumont, who was a member of the
British Arctic expedition of 1875-1876.

—All records for a public sale of a
Guernsey cow have been broken when
the cow Imperial France VIII. was sold
to F. W. Ames, of Northeastern, Mass.,
at \$2000. Cornell University was among
the buyers. Several of the finest speci-
mens of the sale were purchased by the
university.

—The entire number of papers pub-
lished all over the world in every dialect
and language is between 5500 and 6000.
Germany has 900 odd dailies. Great Brit-
ain 250. Paris 150—more than the com-
bined number printed in London, New
York, Philadelphia and Boston. It boasts
the daily with the largest circulation in
the world.

—Since January, 1907, the governor of
Tennessee has pardoned no less than 956
convicts, 152 of whom had been convicted
of murder, and 175 of carrying weapons.
This is an average of nearly six pardons
a week and the record for one day was
thirty-eight. The work of 152 judges,
228 lawyers and 1824 jurymen in murder
cases has been nullified.

—Canada has 1,500,000 acres more
wheat planted this year than ever be-
fore. The Census Bureau states that
complete reports show the total area
now planted to wheat throughout Canada
to be 9,295,000 acres which is 1,554,000
more than last year. The condition is
reported good.

—What a Farmer Must Know.—To be
a farmer of the present time one must
be learned in chemistry, a good carpen-
ter, a fair machinist, an ordinary house
painter, an accurate bookkeeper, a good
veterinary surgeon, a competent civil
engineer, know enough about law to
keep out of court, be a shrewd buyer,
an affable salesman and a good citizen.

—Success is something we all desire.
Edwin A. Potter says that success may
be attained if the following is observed
rigidly, viz.:

"A thorough knowledge of the small-
est details of one's business."
"Well directed effort in work."
"The power to organize a business."

These are the three fundamental stones
for success.

—Dr. Hastings, of Toronto, speaking
before the Canadian Medical Association
in Toronto, declared that 50 per cent.
of all the infants who die in cities, do so
as a result of some disease attributable
to the ordinary market milk. Dr. Chas.
E. North, of New York, added to this
that 700 cases of scarlet fever in Boston
had been traced to one source of milk
supply.

—English was in 1906 the sole
language of worship in 181,393 religious
organizations, with 23,648,267 members,
or 85.5 per cent. of the total number of
the organizations, and 71.8 per cent. of
the total membership, in continental
United States, according to Part I, now
in press, of the Census Bureau's com-
prehensive report on the Census of Re-
ligious Bodies for 1906.

—Eight Millions for Pensions.—The
United States Steel Corporation has
started a fund of \$8,000,000 to be con-
solidated with the fund of \$4,000,000
created by Andrew Carnegie for the pur-
pose of providing a pension fund for
employees. This joint fund will be ad-
ministered for the benefit of employees
by a board selected jointly by the cor-
poration and Mr. Carnegie.

—Rapid Panama Work.—The sixth
year of American construction of the
Panama canal ended May 3. Altogether,
105,888,072 cubic yards of earth and rock
have been removed. That leaves to be
taken out of the water approaches to the
canal 29,232,052 cubic yards of material,
while the steam shovels have to dig
out 38,827,617 yards of solid earth and
rock. The Culebra Cut presents the hard-
est problem, for there remains to be ex-
cavated in that miniature mountain
range 31,128,845 cubic yards, but, as this
is being carried off at the rate of 1,240,-
000 yards per month, the end will soon be
in sight. While all this excavation is
going on, rapid work is being done in
the construction of the great dam and
locks of the canal, and it is estimated
that by June 1 an average of 2,500 cubic
yards of concrete will be laid each day.

OUTLOOK FOR FRUIT.

Apples and Peaches Promise Well, but
Pears Light.

According to reports received here by
dealers, the outlook in western New
York is favorable for various kinds of
fruit. Apples and peaches in particular
are looking fine, but pears and plums
are apparently light. Cherries promise
a fairly good crop and the same is said
to be true of strawberries.

"There seems to be lots of peaches
between Sodus and the Niagara river,"
said one fruit man this morning. "The
trees came through the winter in ex-
cellent shape and blossomed full and
the fruit set well. Pears, on the other
hand, will be light, especially Bartlett's.
Cold, wet weather did much damage in
the early spring, and the fruit on the
trees is smaller than usual, says "Post
Express."

"Apples hold forth promise of a good
yield, especially Baldwins and Kings.
Greenings, however, may be a little light,
and Twenty-ounce and Alexanders also
may be a little shy. Plums and prunes
will be a lighter crop than usual, judg-
ing from present conditions.

"My reports show that the apple crop
in northern Michigan is good, and there
will be many apples in the west. There
will be over 20,000 cars from California
and Colorado. Kansas will also have a
good many and there will be quite a
few in Missouri and Arkansas.

"I understand the Hudson river ter-
ritory will not have so many as last
year, but in some parts of Pennsylvania
and Virginia there will undoubtedly be
a good crop of apples. Other parts of
Pennsylvania report a light crop."

Fruit Crops Affected by Rain.—
Peaches, Pears and Apples Seem Little
Hurt, However.—Rochester, N. Y.—The
fruit crop in this vicinity, according to
present indications, has been slightly
damaged by the continued cold weather
and excessive rains. Both the straw-
berries and raspberries have been af-
fected by the unfavorable conditions.
Cherries are not quite as plentiful as
last year. The prospect for peaches,
pears and apples is thought to be about
normal and may show more favorable
signs later in the season.

The hay and wheat crops got an early
start, and they have been greatly bene-
fited by the rains. The hay will be large
and of good quality if the hot weather
season is not delayed too long, thus
preventing the curing process when the
heading grass is ready to harvest.

The Government Crop Report.—Small
fruits, asparagus and melons about an
average crop. Apples, slightly smaller
crop. Peaches, pears, about average
crop.

The general average condition of
grain crop growth on June 1, 1910, was
about 84.9 as compared with 85.0, 87.9,
77.8 and 85.5 on June 1, 1909, 1908 and
1907, and the ten year average, respec-
tively.

Representing last year's acreage by
100, the preliminary estimates of this
year's acreages are: winter wheat, 102.5;
spring wheat 107.3 (all wheat 104.4);
oats, 103.5; barley 100.7; rye 101.2; cot-
ton 102.8; clover for hay 106.2; sugar
cane 104.2; the total of above crops,
about 103.6.

Fly Time is a Dangerous Period.

At first the fly is only a little worm,
wriggling his tiny grub-like form in
some incubating pile of filth. Soon he
will hatch, and during the warm days
which the weather man has promised
will give life to sextillions upon sex-
tillions of the eggs that were laid last
fall. By carefully clearing up all piles
of rubbish, manure and filth at this
time the eggs may be destroyed before
they hatch.

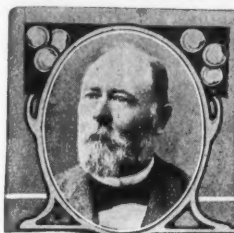
As soon as the fly comes out of his
shell he sniffs the air to see from which
direction he gets the most congenial sort
of a bad odor. But where bad odors at-
tract flies, clean odors will repulse them.
A pleasant-smelling substance, the
fragrance of flowers or perfume, drives
flies away, whereas the odor of decaying
matter attracts swarms of them to one
spot.

It is the fly's habit of lighting on all
kinds of food that makes it dangerous
to the human being. Its sponge-like
feet carry about the typhoid germs that
breed on decayed matters and these the
fly scatters over the food on which it
lights. Keep your house clean, inside
and out; screen all doors and windows,
and see that your retailers do the same,
is the advice of the fly-fighting com-
mittee."

Baton Rouge, La.—That repeated ex-
periments with arsenate of lead have
proved this chemical is the one protec-
tion against the boll weevil, is the asser-
tion to-day of Wilot Newell, secretary
of the Louisiana crop pest commission.
Secretary Newell has issued a bulletin
advising cotton planters to employ this
preparation.



Teddy in Europe.—"This way, Kings, for your morning lesson!"—Kladderadatsch (Berlin).



Breezes from New Hampshire

Written for Green's Fruit Grower
by George B. Griffith.

"The Hired Man."

In every section of the country the most difficult problem which farmers still have to deal with is "help," not only in times like the present, when there is plenty of employment in other callings, but even in hard times, when work and wages are very hard to find in the cities and large villages. Labor-saving machinery enables the farmer of to-day to do two or three times as much as a man could do fifty years ago, but even with this advantage there is a great lack of farm labor, and it is only the farmer that can do all his work himself that is really independent. It is not a matter of wages. There are thousands and tens of thousands of city workmen who do not earn as much as the farmers would gladly pay for their services. Neither is it a matter of the cost of living, for a man can live in the country much cheaper than in the city. Nor is it a matter of health. The explanation is in the fact that the fascinations of city life are so powerful that they overcome all adverse considerations and crowd the city with unemployed labor, which is badly needed on the farms.

"The hired man" of the olden time can no longer be found in the agricultural district. He was one of the best of institutions. He knew his business. He made his employer's interest his own. In many cases he was a fixture on the farm and lived and died there. I remember several of that kind in the neighborhood in Massachusetts where I was reared. In most cases such a hired man, quiet, industrious, honest and really intelligent, felt that he was part owner in the whole establishment. He worked from daylight till dark and was trustworthy everywhere, at all times. A man that the owner of the farm could safely leave in charge when called away even for several days. So too he was respectable and respected. If he was young and ambitious when he began he saved money little by little, married the "hired girl" or a farmer's daughter, bought a farm for himself and her, raised a family and became one of the leaders of the town.

He has become extinct and there is none to take his place, because his sons would "rather starve in the city than have plenty in the country," and here is one of the main obstacles in the way of extensive farming. No man can do business successfully with poor help.

Bound Out Mowing Fields.

We think many farmers make the mistake of leaving their mowing fields too long without turning them over. They either get "bound out" or they get filled with weeds and foul stuff of no great use. Much depends upon the land. Some natural grass lands will go for several years without plowing and give good crops of good hay all the time, while on other soils quite the reverse is true. Some will say we can not cultivate so much land if we plow it up and so leave it as it is. One need not plant it all but just turn it over after haying, put on some dressing and immediately sow it down again with a near certainty of getting a good crop the next year. This is especially true of meadow lands. It will improve the quality and quantity to plow up the land and sow it again even though no dressing should be applied though we should greatly prefer to make a small investment in that direction.

Perennial Carnation.

"Blessed be the hand," says Douglass Jerrold, "that prepares a pleasure for a child, for there is no saying when and where it may again bloom forth." Does not everybody remember some kind-hearted man who showed him a kindness in the days of childhood? The writer of this recalls himself, at this moment, as a barefooted lad, standing at the wooden fence of a poor little garden in his native village, where with longing eyes he gazed on the flowers which were blooming there quietly in the brightness of the Sunday morning.

The possessor came forth from his little cottage (he was a wood cutter by trade and spent the whole day at work in the woods) to gather flowers to stick in his coat when he went to church. He saw the boy, and breaking off the most beautiful of his carnations, which were streaked with red and

white, he gave it to him. And now, after so many events of so many years, the feeling of gratitude that agitated the breast of that boy expresses itself on paper. The carnation long since withered; now it blooms afresh.

The Bean Crop.

A few years ago we heard W. T. Lamoreaux, the "bean king," read a paper on beans, which was very interesting and instructive. As far back as 1893-4 the importation of beans cost two millions of dollars. Under the present tariff beans can be imported at a less cost than formerly, because the foreign shippers invoice them at less than half price real value, and the price for which they are contracted. The Michigan bean crop last year was estimated at a million and a half bushels, and every year it is increasing. Livingston county still produces the most beans in the state. Farmers used to secure a promise of sale before they would plant a ten or fifteen acre patch. The most profitable bean is the marrow pea. Bean raising is profitable and gives returns of 50 to 100 per cent. Two hundred and fifty pounds are put up in each sack.

The east used to be pre-eminently the bean-eating section of the country, but the west is coming up very fast. The California pea bean is very popular. New York, Boston and Chicago consume more than 1500 bushels of beans daily, and the United States consume 19,000 bushels daily. The importations are only made after the home crops are exhausted, and bean farms now prove an entirely safe and profitable investment.

Curiosities of the Cucumber.

Not long ago a case was reported from Nevada, where "the end of the growing vine" after cutting off the cucumber is said to have grown directly into a new cucumber. All we can say is that there is obviously some error in the report. It is true that every little while some one asks the question whether cucumbers can be grown without the ordinary process of fertilization. To make this query plainer to those who are not botanists it may be said that in the cucumber there are two kinds of flowers: first, those which contain organs called stamens, which produce a yellow dust or powder (the pollen); and second, those which have a small cucumber at the base of the yellow showy part of the flower, and which contains no stamens. Now the yellow powder of the one flower must fall upon that part of the young cucumber which lies within the showy part of the other flower in order that seeds may be produced. Just how this powder causes the seeds to grow need not be discussed here. It is enough to say that no seed can be produced without the intervention of the yellow powder (pollen). This process is called fertilization. It is clear then that at any rate, so far as seeds are concerned, that cucumbers cannot be grown without the ordinary process of fertilization.

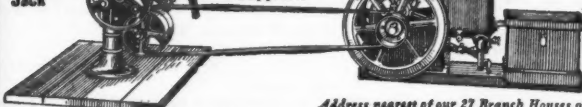
When, however, we come to the question whether seedless cucumbers may not be produced without fertilization we cannot be so certain. The cucumber is structurally very different from the simple "fruits" of many other plants. In the latter the fruit is simply the seed-pod, but in the cucumber we have the seed-pod with the lower parts of the flower leaves also. Where this is the case it is obvious that fertilization is not necessarily indispensable. Cases have repeatedly been reported in which cucumbers and like fruits have developed when fertilization appeared to be impossible. It would be well for those who are experimentally inclined, and who have the time at their disposal, to make a series of careful experiments, taking the precaution to inclose the female flowers (those with the young cucumbers attached) in fine wire gauze before they open.

The Way to Win.

"Strike" while the iron is heated, "Pause" and the iron is cold. If you strike too late on a hardened plate The weld will never hold. "Seek" and success will follow; "Wait" and it passes by. Be quick to grasp, then hold it fast And trust for a better try. "Work" and the world works with you, "Loaf" and you loaf alone. This strenuous world's a continuous whirl; It offers no place for the drone.

Perfect One Horse-Power Engine At Last

It is the strongest and best small engine you ever saw. The work it will do will delight you—so easy to operate and to shift from one job to another. The Jack Junior, a One Horse-power Marvel, has horizontal evaporator tank which takes the place of water jacket and does away with the large water cooling tank required on other engines. Jack Junior is made of the highest grade materials with all working parts expertly machine finished. Four cycle, water cooled, make and break electric ignition. Uses gasoline or kerosene at less than 1 cent per hour. Jack Junior will pump water, run cream separator, milking machine, churn, washing machine, grindstone, small air compressor, lathe or band saw, small corn sheller or ice cream freezer—in fact, any machine not requiring over one horse-power. Jack Junior is mounted on wood base, complete with battery, all ready to run. Gas Engines from 1 to 500 H.-P. Pumping Engines, Pumps, Pump Jacks, Electric Lighting outfits, Belting and Supplies.



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Fairbanks, Morse & Co.,

New York, Cleveland, Chicago.

A GOOD FAMILY CLUB OF PAPERS.

Farm and Home (semi-monthly) 1 year	-	-	.50
Woman's World (monthly) 1 year	-	-	.25
Green's Fruit Grower (monthly) 1 year	-	-	.50
Farm Journal, 1 year	-	-	.20

Regular Publisher's Price, - - - \$1.45

We will send any reader of Green's Fruit Grower the four above publications for the time specified for 75 CENTS. No Canadian order filled at this price. Send all orders to

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- 3316—Girls' Dress. 4 sizes, 6 to 12 years.
3330—Ladies' Dressing Sack. 7 sizes, 32 to 44.
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3332—Ladies' Shirt Waist, with removable chemise. 6 sizes, 32 to 42.
3310—Child's One-Piece Dress. 3 sizes, 2 to 6 years.
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3327—Ladies' Shirt Waist. 6 sizes, 32 to 42.
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3320—Ladies' Five-Gored Skirt. 5 sizes, 22 to 30.
3317—Ladies' Blazer Coat. 5 sizes, 32 to 40.
3318—Ladies' Skirt. 6 sizes, 22 to 32.
3309—Misses' Dress. 3 sizes, 14 to 18 years.

Patterns 10c. each. Order pattern by number, and give size in inches. Address Green's Fruit Grower Co., Rochester, N. Y.

Missouri State Board of Horticulture, fruit crop report, says nearly all the counties show the condition of the fruit crop of Missouri, May 15th, to be as follows: There was wide-spread injury from the low temperatures which prevailed April 20th and 25th and as a result it seems that practically all the fruit was killed in the central-northern, north-eastern, eastern, and in many of the counties of the central part of the state. With the exception of three or four counties in the second tier south of the Missouri river and extending southwestward about four counties back from the Mississippi river, all of the regions mentioned seem to have been swept clean of practically all kinds of fruits.

—Luther Burbank, the plant "wizard" of Santa Rosa, announced the perfection of two flowers new to the world—a poppy, scientifically designated "cenothora burbankii," and a white primrose. His new creations will be extensively reproduced, he says, at a ranch recently purchased by the horticulturist at Lompoc, Santa Barbara county. "I have been working on them for several years," Mr. Burbank, who is visiting here, said last evening. "The poppy is a combination of the shirley, the tulip poppy and a species found in the mountains of north Africa. It is larger and of a brighter hue than any of them and offers a combination of new shades. The primrose is white and five inches in diameter."



Fun for the Family

Casey at the Bat.

Ten thousand eyes were on him as he rubbed his hands with dirt; Five thousand tongues applauded when he wiped them on his shirt. Then while the writhing pitcher ground the ball into his hip, Defiance gleamed in Casey's eye, a sneer curled Casey's lip.

Oh! somewhere in this favored land the sun is shining bright; The band is playing somewhere and somewhere hearts are light, And somewhere men are laughing and somewhere children shout; But there is no joy in Mudville—mighty Casey has struck out.

—Ernest L. Thayer.

Roused Them Up.

A certain Scotch minister, a newcomer in the parish, finding it impossible to arrest the attention of his congregation, became desperate. No sooner did he appear in the pulpit than they promptly composed themselves to sleep, says "Tit-Bits."

One evening after taking up his position, he rapped sharply on the ledge in front of him, and addressed his somnolent flock in tones of severe remonstrance.

"Now brethren," he said, "it's not fair to go to sleep as ye always ha' done directly I begin my sermon. Ye might wait a wee till I get along, and then if I'm not worth hearin', sleep awa' wi' ye and I'll not care; but dinna go before I ha' commenced. Gie me this one chance."

Finding they were all fairly awake by that time, he went on:

"I shall take for my text the two words 'Know thyself,' but I will say before I begin the discourse that I would not advise this congregation to make such profitless acquaintances."

There was not a snore or a nod in the kirk that evening.

"Do you believe that spirits talk and reveal secrets?"

"Unquestionably. That's why I never indulge."—St. Louis "Star."

Changing His Stunt.—Little girl (to father who has done his one performance, that of saying the alphabet backward)—"Now say it sideways."—"Punch."

Quiz—Why do you run your car so slowly these days?

Whiz—With everybody carrying home garden tools you can't run over a man without risking a puncture.

"Son, could you eat some honey in the comb?"

"Dad," the boy said, "I could eat it in the brush."—Montgomery "Advertiser."

Tourist (who during a steady tramp has inquired, once every hour, how far it is to Ballymaloney and, has now for the third time received the same answer, namely, "About four and a half or five miles")—"Thank heaven we are keeping pace with it, any way."

At dinner, while Johnny was visiting his grandfather in Arizona, he noticed that when his grandfather said grace, he bowed his head. This being a new thing to Johnny, he asked his mother: "Ma, what is it grandpa says to his napkin?"—"Ex."

O'Flanagan came home one night with a deep band of black crepe around his hat.

"Why, Mike," exclaimed his wife, "what are you wearing that mournful thing for?"

"I am wearing it for your first husband," replied Mike, firmly; "I'm sorry he's dead."

A Well Informed Girl.—A teacher in a New England grammar school found the subjoined facts in a composition on Longfellow, the poet, written by a fifteen-year-old girl:

"Henry W. Longfellow was born in Portland, Maine, while his parents were traveling in Europe. He had many fast friends, among whom the fastest were Phoebe and Alice Carey."

A Pastoral.

The sun was rising in the west, and shed its beams on Cedarcrest, where pensive goat and sportive cow were perched upon the cedar bough, says Emporia "Gazette." There Frank McLennan watched his flocks, and slugged the gentle sheep with rocks, and drove his hens to lakelet's brim that they might dive and bathe and swim. The pigs were climbing elms and firs, and hired men gathered cockleburrs; a doctor passed on horse's back, and all the ducks called loudly "quack!" The fruit agent asked to stay, all night; the horses whinnied "Neigh." Peace hovered o'er the prairie wide; the cattle lowed, the horses nighed; and sounded through the village smoke, the bark of watchdog, elm, and oak; and he who owned these rustic scenes, had seeded down his farm to beans.

Figures Don't Lie.—Johnny came home the other night in high glee, wearing the arithmetic medal.

"What is that for?" asked his mother. "That's the prize for doing examples," said Johnny. "I did this one: 'If our new baby weighs eleven and a half pounds and gains an ounce each day'—'cause you told Mrs. Smith she did yesterday—'how much will she weigh when she's twenty years old?' And the answer was, four hundred and sixty-six pounds. And the teacher said I earned the prize."—"The Christian Advocate."

One day he was very busily engaged in trying to teach the meaning of the word "smell" to a primary class. He was not making a great deal of headway, and finally asked: "Well, now, what do you use your nose for?"

The class was very quiet for a moment, when up shot the hand of a small boy.

"Well, Johnny," said Mr. Shukers, encouragingly.

"Why," shouted the youngster triumphantly, just as if he had made a great discovery, "we wipe 'em."

Big Hogs.—Some years ago a prominent man, who shall be nameless, went into the business of raising hogs. A friend congratulated him on his success, as his breeds were certainly very fine.

"Hogs!" replied he, contemptuously, "Why, these people never knew what a big hog was till I came here!"

And he wondered why they laughed.

In married life, when jealous fears intrude, And doubts disturb the magic of love's spell, The woman thinks she is not understood—

The man's afraid he's understood too well! —"Life."

Singleton—Are you going to attend the lecture at the hall to-night?

Wedderly—Not me.

Singleton—Why not?

Wedderly—What's the use of a married man giving up money to hear a lecture?—Chicago "News."

The Small Boy's Explanation.

It was Sunday evening. Angelica had invited her "best young man" to the evening meal. Everything had passed off harmoniously until Angelica's seven-year-old brother broke the blissful silence by exclaiming:

"Oh, ma! yer ougher seen Mr. Lighted the other night, when he called to take Angie to the drill, he looked so nice sittin' long side of her with his arm—"

"Fred!" screamed the maiden, whose face began to assume the color of a well-done crab—quickly placing her hand over the boy's mouth. "Yer ougher seen him," continued the persistent informant, after gaining his breath, and the embarrassed girl's hand was removed, "he had his arm—"

"Freddie!" shouted the mother, as in her frantic attempts to reach the boy's auricular appendage she upset the contents of the teapot in Mr. Lighted's lap, making numerous Russian war maps over his new lavender pantaloons.

"I was just going to say," the half-frightened boy pleaded, between a cry and an injured whine, "he had his arm—"

"You boy!" thundered the father, "away to the wood shed."

And the boy made to the nearest exit, exclaiming as he waltzed: "I was goin' to say Mr. Lighted had his army clothes on, and I'll leave it to him if he didn't!"

The boy was permitted to return, and the remainder of the meal was spent in explanations from the family in regard to the number of times Freddie had to be "talked to" for using his fingers for a ladle.

"Ol' Nutmeg's" Sayings.

Written for Green's Fruit Grower by Joe Cone.

The Same Old "Fourth."

Now Johnnie takes the plasters off, And walks upon the earth again; He's just recovered from a "Fourth" They thought was wholly safe and sane!

Baseball kin allus be spelt two ways. Some breakfus' foods may also be food fur thought.

Two heads are better than one of the dispersions match.

All work an' no play makes Tommie a poor farmer.

A big head within usually foilers a big time out.

Wood sawin' will never become popular ez a health developer.

Boys may come, an' men may go, but the circus goes on forever.

The feller who loses never thinks that all is fair in love an' war.

Jealousy is all right when your's or somebuddy else's good name is at stake.

Keepin' the right thing in the right place includes people ez well ez other things.

Courage is a fine thing to hev ef it don't all belong to the other feller.

Swappin' hosses is purty oncertain bizniz, but not ha'f so oncertain ez some uv the hosses.

Love at fust sight is more apt to become a reality of the sight is oncommonly young an' fair.

Ef you are away frum your native place jest hev an ol' home week even ef you hev to do it all alone.

Perhaps some folks will git sartisfaction out uv the idee thet they won't be scat ha'f to death by Halley's comet when it comes ag'in.

Some people who don't know enough to go in when it rains, are bright enough to stop an' help themselves to somebuddy else's umbrella.

It's funny to see how much more bizniz kin be accomplished with a baseball bat in the han's uv a small boy than kin be done with a hoe handle.

To the hunter belongs the sp'les, but the trouble with a good many hunters is they leave things around till they sp'ile so's they can't use 'em.

When a man tells you he hez got somethin' warm fur the winter an' cool fur the summer, you wanten tell him he hez either got the seasons turned around or else he's several years in advance uv his time.

Along Country Ways.

The summer girl is outing now Along the seashore, on the farm; The country lover likes to show How well he drives with but one arm!

Those Little Angels.—Neighbor—"How did that naughty little boy of yours get hurt?"

Ditto—"That good little boy of yours hit him in the head with a brick."—"Jewish Ledger."

Mates. — Bobby—"Honest, is there twins at your house?"

Tommy—"Honest! An' they're just alike."

Bobby—"Built jest the same way, or are they rights and lefts?"—"Toledo Blade."

Seeing Her Home.—Hegan—"I think Miss de Blank is very rude."

Jones—"What causes you to think that? I never thought her so."

Hegan—"I met her out for a walk this afternoon, and asked if I might see her home. She said yes, I could see it from the top of the high school building, and that it wasn't necessary to go any farther."—"United Presbyterian."

Mr. Penn—"They say the streets in Boston are frightfully crooked?"

Mr. Hub—"They are. Why, do you know, when I first went there I could hardly find my way around."

"That must be embarrassing!"

"It is. The first week I was there I wanted to get rid of an old cat we had, and my wife got me to take it to the river a mile away."

"And you lost the cat all right?"

"Lost nothing. I never would have found my way home if I hadn't followed the cat!"—"Everybody's."



Uncle Sam is busy counting noses.—Spokesman-Review.

FRUIT GROWERS PRESENT NEEDS

Berry Baskets and Crates, Peach Baskets, Fruit Pickers, Cherry Pitters, Peach Stoners, Fruit Evaporators, Paring Machines, Corers and Slicers, Fruit Ladders and Pickers, Cultivators, Etc.

BERRY



BASKETS

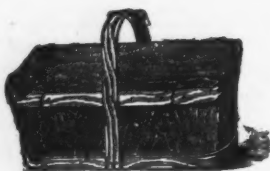
These berry baskets are best for business or home use. They are the standard size, regulated by law, wire sewed and made of cypress, the best material. Order baskets early as the price is sure to advance.

Price, quart baskets, 500 for \$2.00; or \$3.50 per 1000. Pint baskets, oblong shape to fit any standard Crate, \$2.00 per 500, \$4.00 per 1000.

Special prices in larger lots on application.

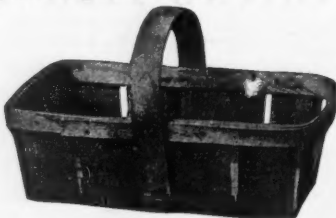
Special—100 berry baskets and 1 standard crate, 95 cents. NOTICE—We cannot fill orders for less than 500 berry baskets, except when one crate is ordered for each 100 baskets.

Standard Crates holding 32 quart baskets, well made of the best material, with dividers, patent hinges and fasteners, with let-in handle on each end, 50c each, \$5.00 per dozen.



CLIMAX BASKETS

For shipping Plums, Cherries, Grapes and other small fruits. They are strong, well made and complete with covers and fasteners. They are generally used for shipping some distance and are built to stand the travel.



SPLINT BASKETS

Are lighter than the Climax and are generally used for Plums, Cherries, Grapes and other small fruits in nearby or home market, where covers are not wanted.

GREEN'S NURSERY COMPANY,

M. H. GREEN, SUPPLY DEPARTMENT, ROCHESTER, N. Y.

If you have never heard a Victor of the present day, send us this coupon

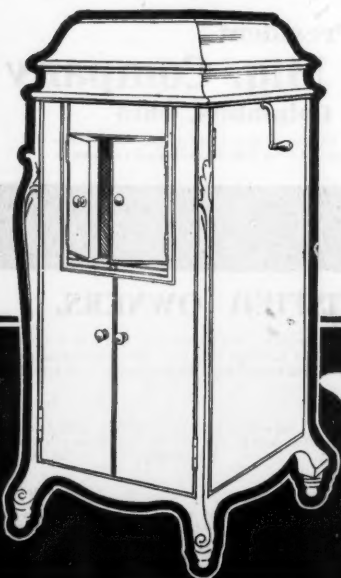
We want you to know this wonderful musical instrument as we know it; to hear it and realize as we do the height of perfection it has reached in recent years; to enjoy with us and the thousands upon thousands of Victor owners, the world's best music, played as you have never heard it before.

You can judge how perfect an instrument the Victor is, from the fact that the greatest opera singers—those who command the highest salaries—Caruso, Calve, Eames, Farrar, Gadski, Homer, Melba, Plancon, Schumann-Heink, Scotti, Sembrich, Tetrassini and others, make records for the Victor—and only for the Victor.

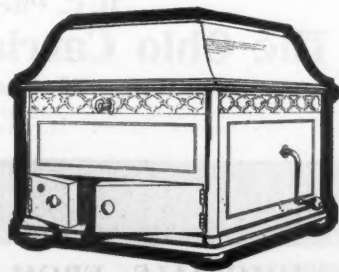
In addition to the world's most famous operatic stars, Pryor's Band, Harry Lauder, Blanche Ring, Josie Sadler, May Irwin, Haydn Quartet, Harry Macdonough, Fisk Jubilee Singers, and a host of other noted artists and organizations make records exclusively for the Victor.

You can still further judge the perfection of the Victor from the fact that President Taft, besides making records for the Victor, has a Victor himself. And so have other prominent men, the wealthiest families of America. His Holiness Pope Pius X, President Diaz of Mexico, the King of England, the Emperor of Germany, the King of Italy, the Queen of Spain, the King of Portugal, and other sovereigns—with all the money at their command they can secure no musical instrument that gives them so much pleasure as the Victor.

Victrola XVI, \$200 and \$250



Victrola XII, \$125



But you can't imagine how loud, clear and true-to-life, the Victor brings to you the voices of the greatest singers, the music of the most celebrated bands and famous instrumentalists, and all other kinds of entertainment.

We can't possibly describe the perfection of these things to you; mere words can't do justice to the Victor—and even if we could tell you, it would only be natural for you to think it was exaggeration.

There's only one way you can come to a full realization of the Victor, and that is to hear it.

We want you to hear the Victor. It is a duty you owe to yourself and family—they shouldn't be deprived of the music and fun that help to make a happy home.

So write us to-day—use the coupon—and we'll send you complete catalogues of the Victor and of the more than 3000 Victor Records. And we'll tell you the name and address of the Victor dealer right in your neighborhood who will gladly play for you—without obligation—any Victor music you want to hear. And if you want to buy, he will arrange easy terms to suit.

Victor Double-faced Records are of the same high quality as Victor Single-faced Records. The only difference is in the price. Buy double-faced if the combination suits you.

New Victor Records are on sale at all dealers on the 28th of each month.

Victor I
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Other styles
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to
\$100



Victor Talking Machine Company

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Berliner Gramophone Company
Montreal
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To get best results use only Victor Needles on Victor Records.

Look for the Victor trademark, "His Master's Voice," on the horn and cabinet of every Victor, on every Victrola, and on every Victor Record.

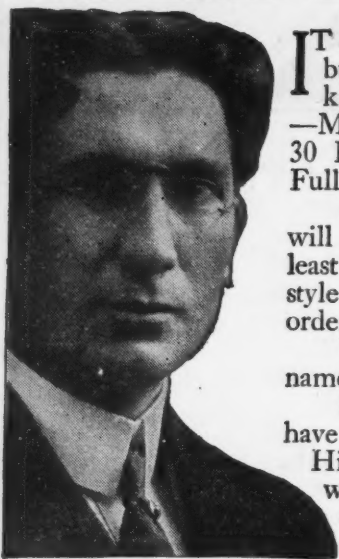
Not a Victor without the trademark.

And be sure to hear the
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Please send to me, as above, your Victor catalogues free, and tell me where I can hear the Victor.
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My direct-from-factory prices will save you big money—at least \$26.50 to \$40.00 on any style vehicle you decide to order from me.

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For over 10 years I have been selling Split Hickory Vehicles this way to over 125,000 customers who have sent for my Style Book whenever they want-

ed a vehicle of any kind.

After you have received my Book, if you have any doubts about ordering just what you want direct from me, I can probably refer you to customers of mine right in your own vicinity, who will be glad to tell you how well satisfied they have been with the Split Hickory Buggies they bought from me.

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I couldn't afford to pay the postage and send you my big book FREE if I did not know that you are bound to be pleased with my Split Hickory Styles and Prices.

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READ THESE SPLIT HICKORY TESTIMONIALS FROM SATISFIED OWNERS.

Ohio Carriage Mfg. Co., Columbus, Ohio.

Gentlemen:—The buggy which I ordered from you reached me all right, and I like the buggy all right. I consider it as good as one which would cost \$25 more from an agent here. Wishing you success in your business, I am

Yours very truly,

MORRISON, TENN.

FRANK MICHAEL.

Ohio Carriage Mfg. Co., Columbus, Ohio.

Gentlemen:—I purchased a buggy of you two years ago, which has proven very satisfactory and am thinking of getting a double carriage. Will you please send me catalog and price-list? I think the dealers ask too much. My buggy is in fine condition now, as you will see by photo that I am sending you.

Yours truly,

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Gentlemen:—I am pleased to announce the arrival of the handsome buggy ordered from you. It arrived in fine condition. It is built up in every way much better than I expected. I think I am safe in saying that

SCOTTSVILLE, KY.

It arrived in fine condition.



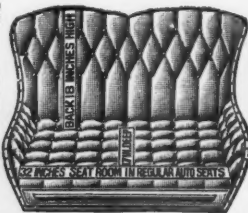
You can save \$40 cash on the price direct of the above Split Hickory Auto-Seat Buggy, illustrated in colors in my Big Free Book.



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Ohio Carriage Mfg. Co., Columbus, Ohio.

BRENTON, PA.

Gentlemen:—The buggy came yesterday all right. Am very much pleased with it. Could not have gotten one as good here for less than \$65 cash. Every one that sees it says so. Will do all we can to sell more for you. Thank you ever so much for your favor.

Yours truly,

W. X. DOTY.

Ohio Carriage Mfg. Co., Columbus, Ohio.

SHEPHERD, ILL.

Gentlemen:—The buggy I ordered of you arrived all O. K. May 2d. I must say that I am well pleased with it. I think I saved at least \$20. Hope you will be able to do business with some of the names I sent you. Respectfully yours, W. F. SCHUNEMAN.